

HE
18.5
.A37
no.
DOT-
TSC-
UMTA-
84-21

UMTA-MA-06-0049-84-6



U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

LISTS: Transportation Brokerage for the Elderly and Handicapped in Lancaster, PA

UMTA/TSC Evaluation Series

Final Report
June 1984

DEPARTMENT OF
TRANSPORTATION

NOV 06 1984

LIBRARY



UMTA Technical Assistance Program

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

NOTICE

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the object of this report.

HE
18.00
A37
no.
DOT
T
JIT
84

1. Report No. UMTA-MA-06-0049-84-6		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle LISTS; Transportation Brokerage for the Elderly and Handicapped in Lancaster, PA				5. Report Date June 1984	
7. Author(s)				6. Performing Organization Code DTS-64	
9. Performing Organization Name and Address Charles River Associates Incorporated* 200 Clarendon St. Boston MA 02116				8. Performing Organization Report No. DOT-TSC-UMTA-84-21	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Urban Mass Transportation Administration Office of Management Research and Transit Service Service and Methods Demonstration Division Washington DC 20590				10. Work Unit No. (TRAI) UM427/R4620	
15. Supplementary Notes *Under contract to: U.S. Department of Transportation Research and Special Programs Administration Transportation Systems Center Cambridge MA 02142				11. Contract or Grant No. DOT-TSC-1757	
16. Abstract The Lancaster Integrated Specialized Transportation System (LISTS) is a transportation broker serving Lancaster County, Pennsylvania. The system was initiated in 1977 and matches the resources of private, specialized transportation providers with the transportation requests of human service agencies. LISTS also arranges specialized transportation for the local transit authority and for a state-funded transportation program for the elderly that serves the entire county. The LISTS system serves a coordinating function only and operates no vehicles of its own. All of its transportation costs are funded by the agencies and programs sponsoring transportation. LISTS' administrative costs are reimbursed primarily through a community development block grant from the Redevelopment Authority of Lancaster and a 4 percent surcharge paid by transportation clients. LISTS' total administrative expenses for fiscal year 1981-82 were \$66,917, and average monthly administrative costs were 15.6 percent of total costs. LISTS has developed a competitive environment within which it contracts with service providers. Such competition has enabled LISTS to hold real transportation costs at a low level. In 1977 dollars, the average cost per trip was \$1.24 in 1979 and \$1.27 in 1981-82. Over 40 human service agencies are affiliated with LISTS, although many use the service infrequently. LISTS' monthly ridership has averaged between 14,000 and 15,000 since 1979. Agencies not affiliated with LISTS tend to have limited transportation needs or have volunteer help and donated vehicles available. The broker's primary limitation has been its difficulty in servicing trips by rural, non-ambulatory residents. Despite this limitation, LISTS has proven to be an effective model for providing low-cost, specialized transportation service in an area with a large rural population.				13. Type of Report and Period Covered Final Report August 1983	
17. Key Words Paratransit, Elderly and Handicapped Transportation, Taxi Cabs, Transportation Brokerage, Human Service Agency Transportation, Service and Methods Demonstration Program				14. Sponsoring Agency Code URT-30	
19. Security Classif. (of this report) UNCLASSIFIED				18. Distribution Statement DOCUMENT IS AVAILABLE TO THE PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161	
20. Security Classif. (of this page) UNCLASSIFIED		21. No. of Pages 136		22. Price	

DEPARTMENT OF
TRANSPORTATION
NOV 06 1984
LIBRARY

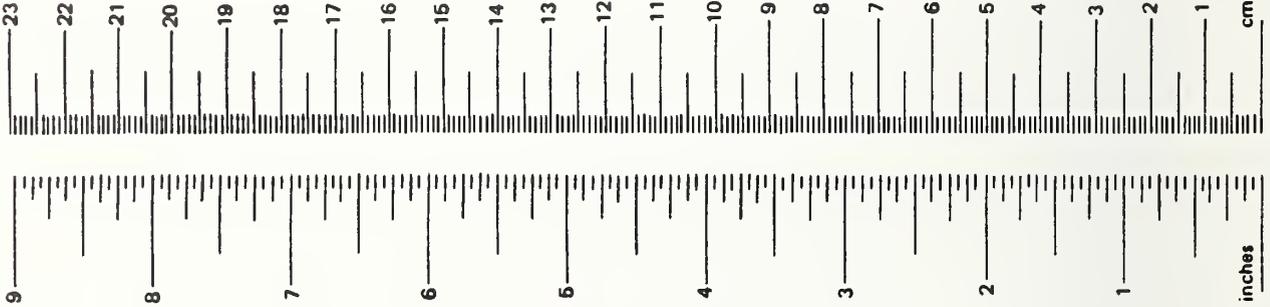
PREFACE

This case study was prepared by Charles River Associates Incorporated (CRA) for the Transportation Systems Center (TSC) of the U.S. Department of Transportation. It is part of the Service and Methods Demonstration (SMD) Program, sponsored by the Urban Mass Transportation Administration (UMTA). Within CRA, Mary E. Lovely prepared this report with assistance from Sarah Slaughter. Daniel Brand is CRA's Officer-in-Charge of work conducted for the SMD program. Bruce D. Spear of TSC served as technical advisor and monitor and James Bautz was the UMTA project manager.

Although CRA accepts full responsibility for the information and conclusions in this case study, many people contributed to it. David Griffiths, Linda Rannels, and Mim Erb of LISTS provided invaluable information and assistance. Other people who provided information for this case study are Thomas P. Shaffer of the Lancaster County Planning Commission, Ed Goode of Friendly Taxi Company, Marty Moore of Columbia Taxi, Sara Jane Cisney of Cisney's Van Service, and Ronald Stough of Lancaster Limousine Service, Ltd.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures				Approximate Conversions from Metric Measures			
Symbol	When You Know	Multiply by	To Find	Symbol	When You Know	Multiply by	To Find
LENGTH							
in	inches	*2.5	centimeters	mm	millimeters	0.04	inches
ft	feet	30	centimeters	cm	centimeters	0.4	inches
yd	yards	0.9	meters	m	meters	3.3	feet
mi	miles	1.6	kilometers	km	kilometers	1.1	yards
						0.6	miles
AREA							
in ²	square inches	6.5	square centimeters	cm ²	square centimeters	0.16	square inches
ft ²	square feet	0.09	square meters	m ²	square meters	1.2	square yards
yd ²	square yards	0.8	square meters	km ²	square kilometers	0.4	square miles
mi ²	square miles	2.6	square kilometers	ha	hectares (10,000 m ²)	2.5	acres
	acres	0.4	hectares				
MASS (weight)							
oz	ounces	28	grams	g	grams	0.035	ounces
lb	pounds	0.45	kilograms	kg	kilograms	2.2	ounces
	short tons (2000 lb)	0.9	tonnes	t	tonnes (1000 kg)	1.1	short tons
VOLUME							
tsp	teaspoons	5	milliliters	ml	milliliters	0.03	fluid ounces
Tbsp	tablespoons	15	milliliters	l	liters	2.1	pints
fl oz	fluid ounces	30	milliliters	l	liters	1.06	quarts
c	cups	0.24	liters	l	liters	0.26	gallons
pt	pints	0.47	liters	m ³	cubic meters	36	cubic feet
qt	quarts	0.95	liters	m ³	cubic meters	1.3	cubic yards
gal	gallons	3.8	liters				
ft ³	cubic feet	0.03	cubic meters				
yd ³	cubic yards	0.76	cubic meters				
TEMPERATURE (exact)							
oF	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	oC	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature



* 1 in. = 2.54 cm (exactly). For other exact conversions and more detail tables see NBS Misc. Publ. 286, Units of Weight and Measure. Price \$2.25 SD Catalog No. C13 10 286.

CONTENTS

<u>Section</u>	<u>Page</u>
1. PROGRAM SETTING AND DEVELOPMENT	1
1.1 Introduction	1
1.2 Lancaster County: The LISTS Service Area	3
1.3 Program Development	8
2. SERVICE DELIVERY AND ADMINISTRATIVE STRUCTURE	11
2.1 Organization of Service Delivery	11
2.1.1 Service Sectors	11
2.1.2 Types of Service Offered by LISTS	13
2.2 Arrangements with Carriers	16
2.3 Purchasers of LISTS Service	16
2.3.1 Human Service Agencies	17
2.3.2 RRTA Special Efforts Transportation Program	18
2.3.3 Pennsylvania's Reduced Fare Program (AdVANCE)	19
2.4 LISTS' Administrative Procedures	22
2.4.1 LISTS' Organizational Structure	22
2.4.2 Trip Scheduling	23
2.4.3 LISTS Tickets	25
2.4.4 Invoicing Agencies and Paying Carriers	27
2.5 LISTS' Administrative Costs and Funding Sources	30
3. IMPACT OF THE BROKER ON THE SUPPLY OF SPECIALIZED TRANSPORTATION	35
3.1 Introduction	35
3.2 Supply of Specialized Transportation Service Before LISTS	35
3.3 Supply of Specialized Transportation Service Available through LISTS	41
3.3.1 Service Availability Issues	41
3.3.2 Driver Assistance and Continuity	42
3.3.3 Vehicle Availability	43
3.3.4 Competition and LISTS' Transportation Costs	45
3.4 Balancing Service Standards and Transportation Costs	53

CONTENTS (Continued)

<u>Section</u>	<u>Page</u>
4. CHARACTERISTICS AND RESPONSE OF THE MARKET FOR LISTS SERVICES .	55
4.1 Introduction	55
4.2 The Elderly and Handicapped Populations	55
4.3 Role of LISTS in the SET and AdVANce Programs	59
4.3.1 LISTS' Role in the SET Program	59
4.3.2 LISTS' Role in the AdVANce Program	62
4.4 Human Service Agencies and Their Use of LISTS	62
4.4.1 The LISTS Human Service Agency Survey	64
4.4.2 Characteristics of LISTS-Affiliated and Non-Affiliated Agencies	66
4.4.3 Transportation Programs of LISTS-Affiliated and Non-Affiliated Agencies	71
4.4.4 Explaining Differences in Fleet Composition and Use .	77
4.4.5 Agency Experience with LISTS.	79
4.4.6 Opinions of Non-Affiliated Agency Managers Toward Coordination	84
4.5 Summary of the Response of Users to LISTS	87
5. CONCEPT FEASIBILITY AND TRANSFERABILITY	89
5.1 Concept Feasibility	89
5.2 Concept Transferability	92
5.3 Conclusions	94
5.3.1 LISTS' Impact on Rural Public Transportation	94
5.3.2 LISTS' Impact on the Fixed-Route Bus System	95
5.3.3 Impact of LISTS' Organizational Structure on Costs .	95
5.3.4 Limitations of LISTS' Approach to Brokerage	96
APPENDIX A - SURVEY OF LISTS-AFFILIATED AGENCIES	A-1
APPENDIX B - SURVEY OF NON-AFFILIATED AGENCIES	B-1

LIST OF ILLUSTRATIONS

<u>Figure</u>	<u>Page</u>
1-1 LOCATION OF LANCASTER COUNTY, PENNSYLVANIA	4
1-2 MAP OF LANCASTER COUNTY	7
2-1 LISTS SERVICE SECTORS	12
2-2 LISTS TRANSPORTATION REQUEST FORM	24
2-3 LISTS TICKETS FOR ADVANCE PROGRAM	26
2-4 LISTS CARRIER DAILY TRIP SHEET	28
2-5 LISTS DAILY COST BREAKDOWN FORM	29
3-1 RRTA BUS ROUTES (COUNTY PORTION), 1980	39
3-2 LISTS CARRIERS BY SECTOR, 1979-1984	46
4-1 LISTS TRANSPORTATION SPONSORS, BY GROUP SPONSORED	60
4-2 TOTAL LISTS TRIPS, BY TYPE, JULY 1981 - MAY 1983	65

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1-1 DEMOGRAPHIC CHARACTERISTICS OF LANCASTER COUNTY, 1980	6
2-1 LISTS FARES FOR AGENCY-SPONSORED TRIPS, BY SECTOR.	15
2-2 LISTS ADVANCE PROGRAM FULL FARES AND REDUCED FARES, BY SECTOR	21
2-3 EXPENSE CATEGORIES FOR LISTS ADMINISTRATIVE ACCOUNT	31
2-4 AVERAGE MONTHLY LISTS COSTS FOR FISCAL PERIODS 1977-82	33
2-5 PERCENTAGE OF ADMINISTRATIVE ACCOUNT RECEIPTS BY SOURCE FOR FISCAL PERIODS 1977-82	34

LIST OF TABLES (Continued)

<u>Table</u>	<u>Page</u>
3-1 TRANSPORTATION CHARACTERISTICS OF LANCASTER COUNTY SOCIAL SERVICE AGENCIES -- 1977	36
3-2 AVERAGE COST OF AGENCY-OPERATED VEHICLES (1976-77)	38
3-3 PERCENTAGE OF TOTAL DISBURSEMENTS BY CARRIER FOR FISCAL PERIODS 1977-82	48
3-4 LISTS CARRIER RIDERSHIP BY GROUP AND SECTOR (1980-81)	49
3-5 AVERAGE MONTHLY TRIPS AND COST PER TRIP FOR FISCAL PERIODS 1977-82	50
3-6 COST COMPARISON OF TRANSPORTATION PROVIDED BY FOUR AGENCIES, USING THEIR OWN VEHICLES AND USING LISTS	52
4-1 ESTIMATED NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS IN LANCASTER COUNTY, BY SEVERITY OF HANDICAP	56
4-2 PERCENT OF TOTAL NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS, BY AGE	56
4-3 ESTIMATED NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS IN LANCASTER COUNTY AND URBANIZED AREAS, BY ABILITY TO USE TRANSIT, 1977	58
4-4 PERCENTAGE DISTRIBUTION OF TOTAL TRANSPORTATION RECEIPTS BY AGENCY, FISCAL PERIODS 1977-82	63
4-5 ORGANIZATIONAL STRUCTURE OF AGENCIES, BY LISTS AFFILIATION	68
4-6 AVERAGE RELIANCE ON FUNDING SOURCES, BY LISTS AFFILIATION	68
4-7 DESCRIPTIVE STATISTICS OF AGENCIES AND AGENCY CLIENTS, BY LISTS AFFILIATION	69
4-8 LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES PROVIDING VARIOUS CLIENT SERVICES	70
4-9 NON-AFFILIATED AGENCIES BY PRIMARY PURPOSE	72
4-10 LISTS-AFFILIATED AGENCIES BY PRIMARY PURPOSE	73
4-11 TRANSPORTATION ARRANGEMENTS OF LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES	74

LIST OF TABLES (Continued)

<u>Table</u>	<u>Page</u>
4-12 PURPOSES FOR WHICH LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES PROVIDE TRANSPORTATION	75
4-13 CHARACTERISTICS OF VEHICLES OWNED BY AGENCIES SURVEYED, BY LISTS AFFILIATION	76
4-14 CHARACTERISTICS OF AGENCY TRIP REQUESTS FROM VARIOUS PROVIDERS, BY LISTS AFFILIATION	78
4-15 PURPOSES FOR WHICH LISTS-AFFILIATED AGENCIES USE AGENCY VEHICLES AND LISTS	80
4-16 COMPARISON BY LISTS-AFFILIATED AGENCY MANAGERS OF VARIOUS LISTS SERVICE CHARACTERISTICS WITH PREVIOUS SERVICE	82
4-17 OPINIONS OF LISTS-AFFILIATED AGENCY MANAGERS ABOUT THE BENEFITS OF LISTS SERVICE	83
4-18 OPINIONS OF NON-AFFILIATED AGENCY MANAGERS REGARDING THE COORDINATION OF THEIR AGENCY TRANSPORTATION PROGRAMS	85

EXECUTIVE SUMMARY

INTRODUCTION

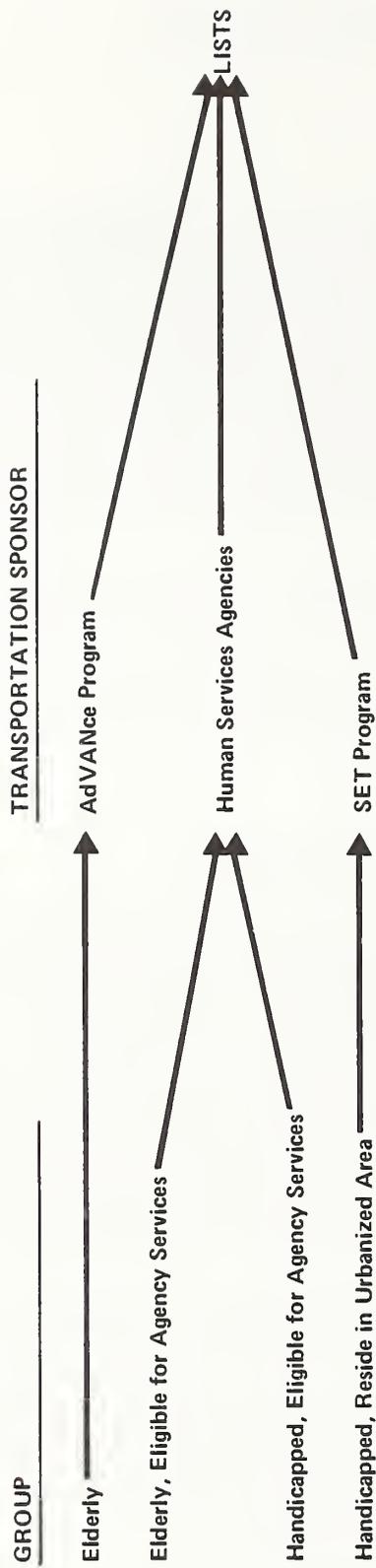
The Lancaster Integrated Specialized Transportation System (LISTS) is a transportation broker serving the county of Lancaster, Pennsylvania. The system has been in operation since November 1977. LISTS matches the resources of private specialized transportation providers with the transportation requests of human service agencies. LISTS also arranges transportation for the Red Rose Transit Authority's (RRTA's) Special Efforts Transportation program (SET) and the state-funded Reduced Fare Program (AdVANce). LISTS operates no vehicles directly and 100 percent of its transportation costs are funded by the agencies and programs sponsoring transportation. A diagram of LISTS' sponsorship is found on the next page.

The purpose of LISTS is to arrange the provision of demand-responsive and fixed-route service to human service agencies and other purchasers in a coordinated, cost-effective manner. The system is characterized by door-to-door service where an individual or an agency calls the LISTS office with a transportation request. LISTS acts solely as a coordinator of demand and supply; its main goal is to promote the efficient use of paratransit vehicles and to eliminate service duplication.

SERVICE DELIVERY AND ADMINISTRATIVE PROCEDURES

LISTS serves the city and county of Lancaster. For the purpose of service delivery, LISTS divides the county administratively into five rural sectors and a city sector. In a competitive bidding process, LISTS chooses annually one carrier to serve each sector. LISTS prices its service on a per-trip basis and offers a variety of service types. The most important services offered in terms of trip volume are local-center service, which provides transportation to and from Office of Aging centers, local-rural and local-urban services, which provide transportation within each of the sectors, and direct-line service, which allows patrons to travel between a rural sector and Lancaster City. Several types of service are provided only on specific days each week, for the purpose of maximizing ridesharing.

LISTS has developed a set of administrative procedures for completing transactions between purchasers and providers. All service purchasers must use LISTS tickets to obtain service. These tickets are collected by drivers and returned to LISTS along with a carrier invoice. LISTS then prepares agency invoices, attaching a 4 percent surcharge to carrier rates to pay for LISTS' toll-free telephone system and ticket printing. Agencies are expected to pay LISTS within 30 days of receiving an invoice. LISTS, in turn, reimburses carriers for service provision.



SOURCE: Charles River Associates.

LISTS TRANSPORTATION SPONSORS, BY GROUP SPONSORED

Because LISTS has no transportation funds of its own, it operates a zero-balance transportation account. Carriers are not paid until LISTS has received sufficient income from the agencies. LISTS also maintains an administrative account through which it manages its administrative expenses. The broker's administrative costs are funded by Federal Community Development Block Grant (CDBG) funds, a Pennsylvania Department of Transportation (DOT) grant, and the 4 percent surcharge to its transportation charges. In fiscal year 1981-82, LISTS' administrative expenses totalled 15.6 percent (\$66,917) of the total (transportation and administration) cost of the system (\$427,968).

EFFECT ON SUPPLY

LISTS has developed a competitive environment within which it contracts with providers. A total of eight providers have served LISTS at different times since 1977. In the latest round of contracting, providers in four of the six LISTS sectors were challenged by competing companies. In three sectors, providers who had never previously served those areas bid to provide service. This level of competition appears to have had a desirable effect on transportation costs. An examination of the average cost of service incurred by four agencies using both their own vehicles and LISTS' indicates that in real (deflated) terms, two agencies currently pay less per trip than they did before, one agency pays the same amount per trip, and one agency pays more per trip.

As the broker, LISTS must balance its search for service economies against agencies' desires for high-quality service. LISTS limits its services in several ways to reduce costs but requires that carriers maintain a minimum quality of service. LISTS' complaint procedure is the primary method by which agencies express their desire for quality improvements. Some carriers would like to see the complaint process expanded to include a dialogue between carriers and agencies.

CHARACTERISTICS AND RESPONSE OF THE MARKET FOR LISTS SERVICE

There are an estimated 42,338 elderly and 13,500 transportation-handicapped persons residing in Lancaster County. An unknown percent of these people receive transportation services through human service agencies. Elderly persons (65 years and older) are also eligible to purchase service through LISTS at a 75 percent discount through the AdVANce program, funded by state lottery revenue. Nonambulatory and semi-ambulatory persons residing in the Lancaster urbanized area can use the SET program, which provides LISTS service inside the Lancaster City sector. SET is funded by the RRTA to fulfill Federal Section 504 requirements for service to the handicapped.

As the AdVANce provider, LISTS appears to have had a positive impact on program costs. Because trips can be provided on a shared-ride basis, a

larger number can be obtained with the county's allotted program funds, and the cost to users reduced. In exchange for cost containment, AdVANCE patrons are restricted to the services provided by LISTS. As the SET provider, LISTS' major influence on the program again has been in containing program costs. LISTS provides a feasible alternative for the RRTA to using exclusive-ride private carriers or providing the service using its own unionized labor. One negative effect of using LISTS, however, is that SET service is available only in the Lancaster City sector rather than the slightly larger "urbanized area," which was the original target area for the program.

LISTS arranges transportation for over 40 human service agencies, many of whom previously used agency vehicles or volunteers. The case study reports on the findings of a survey of LISTS-affiliated and non-affiliated agencies. These findings indicate that LISTS-affiliated agencies serve more clients, have larger transportation budgets, and provide transportation for different purposes than do non-affiliated agencies. An examination of the determinants of LISTS usage finds that the purposes for which an agency provides transportation are the most important factors in predicting whether or not an agency uses LISTS. LISTS has a limited number of lift-equipped vehicles available and the survey indicates that agencies serving nonambulatory persons are less likely than other agencies to use LISTS.

CONCEPT FEASIBILITY AND TRANSFERABILITY

In conclusion, Lancaster County's experience in coordinating specialized transportation services through a transportation broker has been successful, as measured by LISTS' achievement of the goals set for it. The main drawback to the system is that it has not been able to provide regular lift-equipped service outside Lancaster City and, as a result, agencies serving nonambulatory people are less likely than other agencies to use LISTS. The broker offers several lessons for localities interested in paratransit brokerage, particularly with regard to agency participation in a coordinated system, restraining the growth of transportation costs, and limiting administrative expenses.

1. PROGRAM SETTING AND DEVELOPMENT

1.1 INTRODUCTION

This report is a case study of the Lancaster Integrated Specialized Transportation System, which is better known as LISTS. LISTS functions as a broker of paratransit resources, matching services provided by paratransit carriers with the needs of Lancaster County, Pennsylvania, human service agencies. Paratransit refers to transit service which does not travel along a fixed route. It covers a wide range of services, including car pools, taxis, wheelchair-lift-equipped vans, and subscription buses. LISTS also coordinates service for two special programs, one funded by the State of Pennsylvania and the other funded through the county transit authority. LISTS is administratively independent of both the agencies and the carriers; it provides no transportation services directly.

Human service agencies contract with LISTS for the provision of transportation service. According to these contracts, the agencies agree to pay LISTS for transportation provided to their clients. LISTS, in turn, is responsible for arranging service and reimbursing the carriers that actually provide it. As of May 1983, 40 human service agencies had contracts with LISTS for the provision of transportation service. These agencies sponsor over 15,000 trips each month through LISTS. The Lancaster County Office of Aging sponsors the largest groups of clients serviced by the system.

LISTS coordinates paratransit service throughout Lancaster County. Administratively, LISTS divides the county into five rural service sectors and Lancaster City, and purchases service for each sector through an annual competitive bidding process. Carriers may bid to provide service to more than one sector, and one carrier currently provides service to three sectors. Although not-for-profit carriers are eligible to be LISTS carriers, to date all the carriers contracted by LISTS have been for-profit taxi and van companies.

LISTS offers a variety of service within each sector. The most important types of service in terms of trip volume are service within a sector to and from local Office of Aging centers, service between Lancaster City and surrounding sectors, and local service within each sector. Carriers must bid on all service types in order to be considered for the award of a sector contract. Some types of service are provided only on certain weekdays.

LISTS also coordinates the use by human service agencies of the local bus network. Bus service in Lancaster County is provided by the Red Rose Transit Authority (RRTA), a publicly owned and operated system. Agencies sponsoring client trips that can be served by the RRTA are able to do so

through LISTS. This allows the agencies to pay for these trips in the same manner as they pay for other LISTS trips. LISTS also provides demand-responsive feeder service to RRTA routes for ambulatory agency clients making trips partially served by local bus service.

In addition to LISTS' use of the bus system, the RRTA operates a user-side subsidy program through LISTS for non-ambulatory persons within the RRTA service area using a local taxi company. This program, known as Special Efforts Transportation (SET), allows the RRTA to meet Federal Section 504 requirements for service provision to the handicapped.

Beginning in May 1982, the LISTS program expanded to include the coordination of trips sponsored by the State of Pennsylvania's Reduced Fare Program for Senior Citizens, a program providing funding from the state lottery program for senior citizen transportation. Under the program, the state reimburses counties for 75 percent of the cost of providing transportation to individuals 65 years of age and older. Only shared-ride, demand-responsive service is eligible for reimbursement under this particular state program. The Reduced Fare Program, known as AdVANce in Lancaster County, is expected to significantly increase the number of trips coordinated by LISTS.

The concept of transportation brokerage has grown in popularity in recent years. This growth is due to the recognition of specific problems in the matching of transportation supply and demand, such as a limited information flow between sellers and buyers, and institutional barriers to coordination. Transportation brokerage takes many forms and can involve many different segments of the transportation market. LISTS is one example of a broker being used to coordinate the delivery of transportation services to the elderly and handicapped. The coordination of transportation provided by human service agencies has received serious attention in recent years, partly in response to congressional mandates such as those of the Administration on Aging, which require coordination of services funded with Federal contributions. Coordination has also received attention at the state and local levels, where inefficiencies in existing agency transportation networks have been noted by many planning agencies.

The Service and Methods Demonstration (SMD) program of the Urban Mass Transportation Administration (UMTA) has provided demonstration funds for several transportation brokerage projects, including a broker of elderly and handicapped services in Pittsburgh, Pennsylvania, and several in northeastern Illinois. Lancaster County was selected as the subject of an SMD case study for a number of reasons. First, LISTS is an example of transportation brokerage in a county with a large rural population. Rural service delivery often requires special institutional responses because of low trip densities and large service areas. This case study provides information about the mechanisms developed by LISTS to meet this challenge. Second, LISTS provides a model of a human-service-agency transportation coordination program that

includes the public bus system as one of its carriers. This interface of demand-responsive and fixed-route service has the potential for considerable service delivery efficiency but it is rarely attempted. Finally, LISTS is of interest because it provides further evidence on the organizational efficiency of transportation brokers. A key question in the development of a transportation broker is whether the added service delivery efficiencies will outweigh administrative costs resulting from the brokering function. LISTS provides useful information for pondering this question because it is a "no frills" application of the brokerage concept; that is, it serves only limited functions and it operates on a limited budget. LISTS engages in very little service planning and a minimum of outreach activities, and performs no regulatory functions. LISTS is a good example, therefore, of the changes that can take place when a transportation broker seeks simply to match supply and demand.

This case study begins with a description of Lancaster County and the development of LISTS. The second section describes how LISTS operates and presents the administrative costs of the program. The third section identifies the paratransit resources available in Lancaster County before LISTS, discusses the supply changes promoted by the broker, and reports on the response of paratransit carriers to the LISTS program. The fourth section describes the elderly and handicapped population in Lancaster County and the network of human service agencies serving this population. Using material from a survey of human service agencies implemented for this case study, this section also contains information about the transportation resources of LISTS-affiliated and non-affiliated agencies and considers a variety of factors that may affect an agency's decision to use LISTS. The final section summarizes the impact of LISTS on the market for specialized transportation services and assesses the transferability of these results to other localities.

1.2 LANCASTER COUNTY: THE LISTS SERVICE AREA

LISTS provides service throughout Lancaster County, Pennsylvania, a county located about 65 miles to the west of Philadelphia on the southeastern border of the state (see Figure 1-1), and covering a land area measuring 946 square miles. Bounded on its western edge by the Susquehanna River, the county has a rich dark soil and a long growing season that make it Pennsylvania's top agricultural county and the leading nonirrigated county in the United States. In addition, Lancaster has a history as an industrial community dating back to the 1700s, partly due to its rich iron ore deposits, and also to its location as the outfitting post for westward-bound pioneers.

The climate of Lancaster County is characterized by generally moderate changes of temperature, with abundant and dependable precipitation. Winters and summers are usually mild, though extreme temperatures of -27° and 107° have been recorded. Precipitation is fairly evenly distributed, with maximum

amounts during the late summer months from gusting summer storms. A topographical sketch of Lancaster indicates an undulating plain stretching southeast of the northern Appalachians, with elevations ranging from 100 to 1,200 feet above sea level.

According to the 1980 Census, Lancaster County has a population of 362,346, a 13.2 percent increase from 1970, with the majority of that growth occurring in the urban areas (see Table 1-1).** The primary population and commercial center of the county, Lancaster City and its close environs account for almost 55 percent of the total county population. Lancaster City and the urbanized area around it are surrounded by rural farmland. The total number of households in Lancaster County is 123,864, and the average number of people per household, 2.83, is slightly higher than the national average of 2.75. The county's per capita income of \$7,089 is slightly lower than the national average of \$7,313, with almost 50 percent of the county's population in the labor force.

The number of people 65 years of age and over residing in Lancaster County in 1980 was 42,338, or 11.7 percent of the population. This percentage is slightly higher than the national average, estimated at 11.2 percent. The median age is approximately 30. The Lancaster County Planning Commission estimated the total number of transportation-handicapped people in the county, as of November 1978, to be approximately 13,500, or almost 4 percent of the population, with more than half of that population living in the rural portions of the county.

The majority of the elderly and handicapped live in Lancaster City or in other developed areas such as Mount Joy, Columbia, Ephrata, New Holland, and Quarryville. These areas can be located on the map in Figure 1-2. Although a variety of goods and services are available in the population centers outside Lancaster City, there is still a considerable need by the elderly and handicapped for transportation from the rural centers to Lancaster City. The city contains the county's major government buildings, medical facilities, and shopping areas. Public transportation between Lancaster City and the rural centers is hindered, however, by long distances and low demand density. Medical trips to the city from locations such as Quarryville, for example, may require a vehicle to be engaged all day serving only a small number of people, since it is often impossible to schedule more than two trips with one vehicle during normal business hours. It is obvious that to enhance efficiency, it is desirable to coordinate the demand for such trips, thereby increasing vehicle productivity. As discussed in Section 2, LISTS has developed a number of administrative procedures to achieve this type of efficiency.

*U.S. Travel Data Center, 1980.

**All 1980 data are from the U.S. Bureau of the Census, 1980 Census of Population.

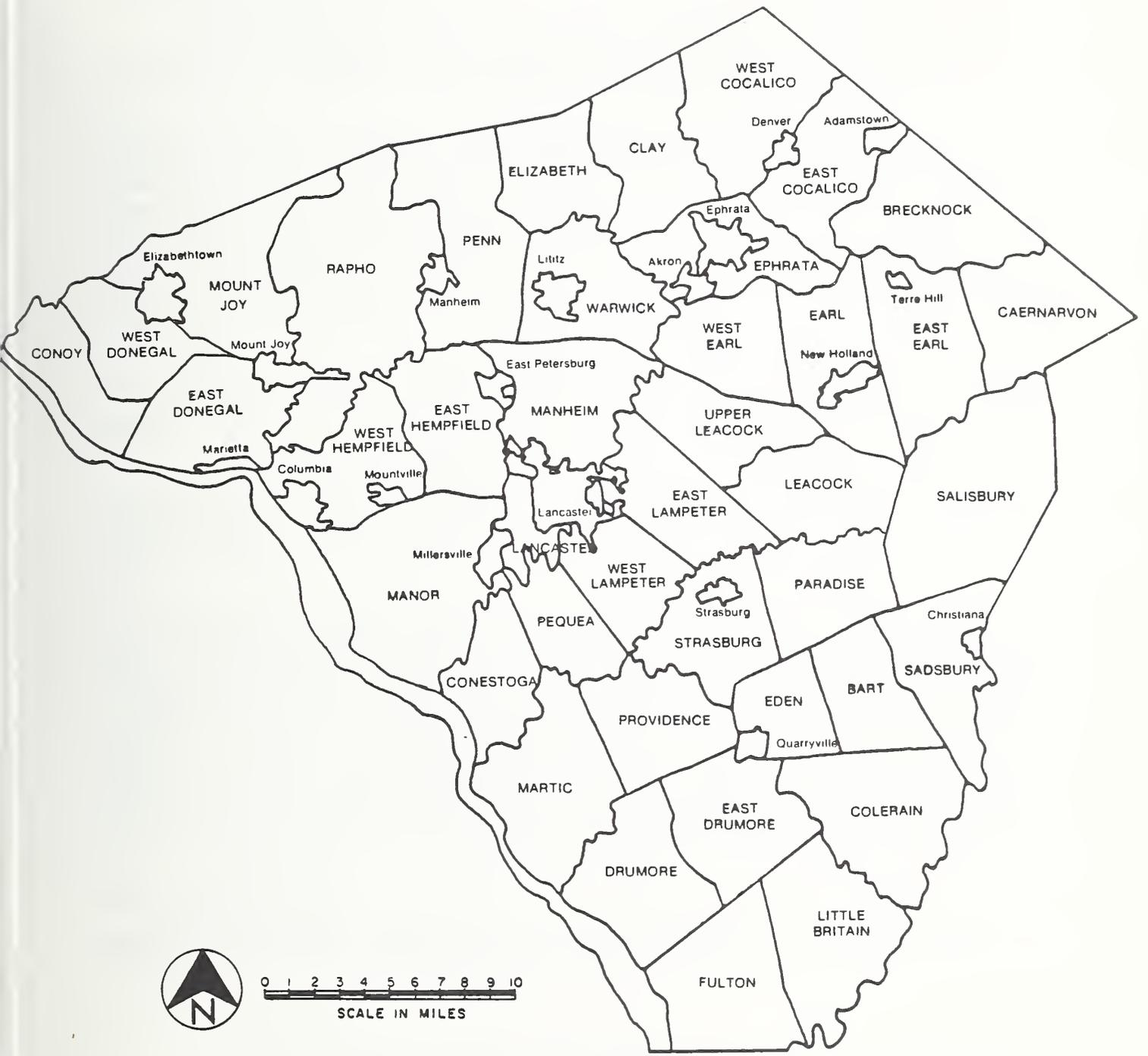
TABLE 1-1. DEMOGRAPHIC CHARACTERISTICS OF LANCASTER COUNTY, 1980

Population	362,346
Area (square miles)	952
Population density (persons per square mile)	380.6
Urban population (percent)	54
Rural population (percent)	46.7
Number of persons 65 years of age and over	42,338
Number of transportation-handicapped persons*	13,500
Number of households	123,864
Average number of persons/household	2.83
Median family income (families)	\$20,569
Per capita income	\$7,089
Income distribution (families)	
Under \$5,000	4,293
\$ 5,000-14,999	24,154
\$15,000-19,999	17,432
\$20,000-24,999	16,361
\$25,000-34,999	20,173
\$35,000-49,999	9,526
Over \$50,000	3,926
Mode to work (persons)	
Public transit	2,249
Walk	14,666
Work at home	7,739
Drove	140,881
Carpool	33,745
Other	2,792

*Source of these data is the Lancaster County Planning Commission, 1978.

SOURCE: U.S. Bureau of the Census, 1980 Census of Population and Housing.

NOTE: Income distribution from telephone call to U.S. Bureau of the Census, December 22, 1983.



SOURCE: LCPC

Figure 1-2. MAP OF LANCASTER COUNTY

1.3 PROGRAM DEVELOPMENT

The Lancaster Integrated Specialized Transportation System was initiated as the result of a county-level planning study of the demand for specialized services and available paratransit resources. The planning process identified a number of problems with the paratransit network in place prior to LISTS and recommended a brokerage approach to coordination. The study led to an implementation task force and the organization of LISTS.

Prior to LISTS, Lancaster County human service agencies used a variety of transportation arrangements to support agency programs. Many agencies provided service in agency vehicles, using volunteer drivers. Two agencies contracted with paratransit carriers for transportation service. One agency, the Community Action Program (CAP), owned a number of vehicles and provided service for other agencies as well as its own clients. Many agencies funded by the Lancaster County Office of Aging, the largest agency sponsor of trips in the county, used CAP to provide transportation to their clients.

In 1974, four agencies (the Lancaster County Office of Aging, CAP, Handicap Pre-school, and Ephrata Area Rehabilitation Service), notified the Pennsylvania Department of Transportation (Penn DOT) of their intention to apply for vehicle funding under the newly initiated Federal 16(b)(2) program. At that time, the United Way, which in 1971 had started a volunteer transportation system for individuals with handicaps and low incomes, initiated a transportation task force. This task force studied the need for specialized services and recommended that a number of agencies coordinate their use of transportation services, perhaps through the designation of one agency as a transportation coordinator.*

In response to the 16(b)(2) requests by several agencies, Lancaster Yellow Cab Company protested to Penn DOT that the 16(b)(2) funds were unnecessary since private cab companies in the county had sufficient resources to meet agency needs. The Lancaster County Planning Commission (LCPC) agreed to study this and other issues surrounding the provision of service to elderly and handicapped individuals. Funding for the LCPC study came from the Commonwealth as part of the Governor's Rural Public Transportation Studies. This study was initiated in 1975, and included the development of an ad hoc advisory committee on which representatives of all transportation providers, including the RRTA, were invited to sit.

At the second meeting of the Ad Hoc Committee, LCPC staff presented the results of their inventory of human service agencies and private companies providing transportation to the elderly and handicapped. The staff presented the concept of transportation brokerage to the committee as a means of

*Carter-Goble Associates, Paratransit Case Studies, 1981.

achieving coordination. Because no major objections to the concept were expressed, the staff proceeded over the next few months to develop and evaluate the concept in detail.*

The LCPC staff analyzed the existing paratransit service network, identifying problems of route duplication, vehicle-size restrictions resulting in sub-optimal service efficiencies, and unutilized vehicle capacity. They further identified the potential for demand consolidation, higher vehicle utilization, and feeder routes to the RRTA network. These types of efficiencies could be gained, according to the LCPC report, through coordination and, specifically, through a brokerage system.** The fundamental goal of the broker, called LISTS, would be to consolidate the demand for transportation services by human service agencies. The broker, as envisioned by the LCPC and the ad hoc committee, would have four functions: a) determining who is eligible for transportation; b) scheduling the provision of service; c) supervising the actual operation and maintenance of vehicles; and d) keeping records of who receives service. Four organizational options for the broker were considered:

1. An existing non-profit corporation, the most likely candidate being CAP;
2. The Red Rose Transit Authority;
3. A new paratransit association, which was being formed by private carriers;
4. A new non-profit corporation.

By a consensus decision of the advisory committee, the fourth option, a new non-profit corporation, was selected as the appropriate organizational form for the paratransit broker. The RRTA was rejected as an option because it was suspected that existing labor-management agreements might prevent the Authority from brokering transportation services to carriers with non-unionized labor. A non-profit paratransit association was rejected because the proposed decision-making structure (composed mainly of private carrier representatives) did not appear to be capable of unbiased contract awarding nor an appropriate agent for encouraging competition. CAP was considered a feasible alternative but, as one of the largest agencies and transportation sponsors in the county, it was felt that CAP could not be an

*Lancaster County Planning Commission, Rural Public Transportation Study, 1977, p. 6.

**Ibid., p. 42.

unbiased arbitrator between carriers and agencies. It was also observed that CAP's organizational structure was not designed for transportation management. Despite the difficulties of establishing a new entity, a new non-profit corporation was chosen by the study group as the best option for organizing the transportation brokerage.

In April 1977, an Implementation Task Force was formed to develop the new brokerage corporation. The task force was headed by a representative of a local taxi company and a staff member of the LCPC. It spearheaded a broad program of public participation, designed to generate interest in LISTS among agencies and carriers. There was a great desire to develop the brokerage as quickly as possible since many agencies at that time were eliminating their transportation programs because of funding cutbacks, and wanted to purchase limited amounts of service by other means. Thus, many agencies were anxious to have another transportation alternative available.

In October 1977, the new brokerage corporation, LISTS, was established. A successful application had been made to the Federal Highway Administration for a Section 147 Demonstration Grant, but this money was not available until January 1979.* An application for Pennsylvania Act 10 rural transit funds had been unsuccessful. The County Commissioners provided LISTS with a \$15,000 loan for administrative expenses until the Section 147 grant funds were available. Five thousand dollars of this amount became a local contribution to LISTS, and the remaining \$10,000 was eventually repaid by the broker. Between November 1977, when LISTS started as an organization, and January 1978, when it was able to begin service after a competitive bidding process, Lancaster Yellow Cab provided service to the Office of Aging. This interim service symbolized the developing relationship between private carriers and human service agencies through LISTS.

In the next section, we describe LISTS' organization and its functions. We also discuss the administrative costs of the broker and its funding sources.

*Carter-Goble Associates, op. cit., pp. IV-5, IV-6.

2. SERVICE DELIVERY AND ADMINISTRATIVE STRUCTURE

2.1 ORGANIZATION OF SERVICE DELIVERY

When designing the Lancaster Integrated Specialized Transportation System (LISTS), county planners were faced with developing a service delivery system comparable with the characteristics of paratransit demand in Lancaster County. Two characteristics were of particular importance to those who wished to improve the efficiency of service delivery. First, it was recognized that the county, with a land area of 946 square miles, forms a very large service area. Some of the trips requested by LISTS service purchasers were expected to cover long distances, requiring the use of vehicles for long periods of time. Thus, there would be a great advantage to organizing these trips into shared rides. Second, because the broker would be coordinating the demand of many purchasers, it was clear that a wide variety of trips would be requested. Pre-arranged group trips, regularly scheduled trips, and trips with variable return trip timing (e.g., medical trips) would be among the trips requested from the broker. Obviously, these trips would cost different amounts to provide. A fare schedule that recognized these cost differences was desired, but a distance-based fare schedule was unacceptable to county human service agencies.

In response to these characteristics of paratransit demand, LISTS was organized to deliver a variety of service types rather than simply offering trips. The types of service offered are defined primarily by origin and destination but also by other trip characteristics, such as evening service. Each service type has its own fare schedule and hours of operation. LISTS service is also differentiated by geographic sectors, which are used in its competitive bidding process for contracting with carriers. Each sector is served primarily by one carrier. Both of these administrative devices are used to promote ridesharing and to create an equitable assignment of transportation costs. The LISTS service sectors and the types of service offered are described below.

2.1.1 Service Sectors

For the purpose of organizing its service delivery, LISTS divides Lancaster County into five rural sectors and Lancaster City. LISTS service sectors are shown in Figure 2-1. Within the rural sectors, there are a number of small towns that are the origin or destination of many local trips. These areas include Columbia in Sector 1, Mount Joy in Sector 2, Lititz and Ephrata in Sector 3, New Holland in Sector 4, and Strasburg and Quarryville in Sector 5. Office of Aging centers are located in each of these areas. Despite the activities in these rural centers, there is only a small demand for inter-sector travel. People residing in the rural sectors generally travel to Lancaster City for services that cannot be obtained within their own sector.



SOURCE: LISTS

Figure 2-1. LISTS SERVICE SECTORS

As discussed below, the sectors were designed to allow for aggregation of demand. The majority of trips in any given sector are provided by one carrier, who is encouraged to schedule trips in the most efficient manner possible. Particularly outside Lancaster City, most trips are on a shared-ride basis in 12 or 15 passenger vans. Inside the city, there is a greater variety of origins and destinations and, in many cases, taxicabs (sedans) are used.

2.1.2 Types of Service Offered by LISTS

LISTS offers the following types of service:

- A. Red Rose Transit Authority (RRTA) -- Bus service is available on a fixed-route basis throughout the RRTA service area. Special tickets are available from LISTS for agencies sponsoring clients' bus trips. The agencies are billed for these trips through LISTS.
- B. Direct Line -- This service type is designed to accommodate requests for transportation between the rural areas of the county and the city of Lancaster when they cannot be provided by RRTA because of a client's mental or physical handicap. This service is also offered to ambulatory clients in rural areas not served by the RRTA or where connections to RRTA service cannot be made. To enhance vehicle utilization, this service is offered on a limited number of days per week, depending on the service sector. Direct-line vehicles arrive in Lancaster City at 9:00 a.m. and 1:00 p.m., and depart Lancaster City at 11:00 a.m. and 3:00 p.m.
- C. Local Rural -- This service type provides transportation to and from various destinations within a particular rural sector outside Lancaster City.
- D. Local Center -- This service type provides transportation between a client's home and the local Office of Aging multi-purpose center. There is an Office of Aging center in every sector served by LISTS. Most of these trips are requested on a routine basis.
- E. Local Urban -- This service type accommodates trip requests within a six-mile radius of the center of Lancaster City.
- F. Feeder Service -- This service type is designed to accommodate the needs of a client whose trip may best be made using an RRTA bus, but who lives too far from the bus routes to use RRTA service. Feeder service will:
 - 1) Provide transportation to the bus route;
 - 2) Coordinate the above transportation with the appropriate RRTA bus, which will then transport the client for the long-distance portion of the trip;

- 3) Coordinate urban distributor service, as needed, from the bus stop to the final destination.

A ticket is required for each transporter/carrier and special arrangements must be made with LISTS to schedule a trip of this type.

- G. Special Evening Transportation -- This type of service is designed to meet agency requests for evening service within a rural sector (local-rural service) or between a rural sector and Lancaster City (direct line). Special arrangements must be made with LISTS for this type of service because the rural sector carriers do not operate regularly in the evening hours.
- H. Cross-Sector Transportation -- This service type encompasses trips from one rural sector to another. Because LISTS receives relatively few requests for this type of service and because it requires carriers to cross sector boundaries, this type of trip requires special arrangements.

LISTS provides these services for persons requiring the use of a wheelchair, as well as those who are ambulatory or semi-ambulatory. When requesting a trip, a wheelchair user must inform LISTS if he or she requires a lift- or ramp-equipped vehicle. LISTS also accommodates special transportation needs of agencies and their clients. For example, LISTS can arrange for cross-sector service to a group of individuals sponsored by an agency. Such trips are subject to negotiated rates between the carrier and LISTS. In addition, LISTS service is occasionally used as back-up service for agency vehicles when a vehicle is unexpectedly out of service or delayed.

LISTS uses the service types described above as a major determinant of its fare schedule (Table 2-1). Fares are set according to carriers' bids, within each sector, to provide each type of service.* The cost of a LISTS trip depends on the sector, the type of service and, in some cases, the volume of service provided. Local-rural, local-urban, and feeder service are priced at one fixed rate, depending on the sector. Direct-line and local-center trips are priced according to service volume and sector. The fare for a direct-line trip depends on the number of passengers carried on any given trip. This discourages single-passenger trips, which are very costly, and it provides an incentive for flexibility in trip timing. In general, local-center trips are priced according to the total number of trips requested by an Office of Aging center each month. Two of the three rural sector carriers use this system, and claim a sliding scale reflects the service economies they are able to achieve at higher levels of demand by an agency center.

*LISTS adds a 4 percent surcharge to the carrier bids, as discussed below.

TABLE 2-1. LISTS FARES FOR AGENCY-SPONSORED TRIPS, BY SECTOR
(FISCAL YEAR 1982-83)

Type of Service	Rate Per One-Way Trip					Lancaster City
	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	
Direct Line						
1 passenger	\$18.72	\$16.64	\$20.80	\$10.40	\$18.72	--
2 passengers	11.44	9.88	15.60	8.32	11.96	--
3 passengers	8.32	7.28	12.48	7.28	8.32	--
4-5 passengers	6.76	5.72	8.84	5.20	6.76	--
6-7 passengers	5.72	5.20	7.28	3.64	5.72	--
8-9 passengers	4.68	4.16	6.76	3.64	4.68	--
10+ passengers	3.64	3.12	5.72	2.60	3.64	--
Local Rural and Feeder	3.12	3.02	3.12	3.12	4.78	--
Local Center	*	1.66	2.50	2.96	*	--
Local Urban	--	--	--	--	--	2.33
Urban Center	--	--	--	--	--	1.50

*Sector 1	
0-700	- \$3.38
701-800	- 3.28
801-900	- 3.17
901-1000	- 3.07
1001-1100	- 2.96
1101-more	- 2.86

*Sector 5	
0-1049	- \$3.43
1050-1099	- 3.33
1100-1149	- 3.22
1150-1199	- 3.12
1200-1249	- 3.02
1250-1299	- 2.91
1300-more	- 2.81

*Rate is computed by the number of one-way trips per month:

SOURCE: LISTS.

The service types are also used as a means of encouraging ridesharing. LISTS provides local-rural and direct-line service only on days when there is sufficient demand to justify the use of a van. Local-rural service is provided Monday through Friday in Sectors 2, 3, and 5, and Monday through Saturday in Sector 1. In Sector 4, there are only enough service requests to provide service on Monday, Wednesday, and Friday. In Lancaster City, service is provided seven days a week. Direct-line service is provided three days a week in Sectors 1, 2 and 5 and two days a week in Sectors 3 and 4.

2.2 ARRANGEMENTS WITH CARRIERS

LISTS solicits competitive bids from carriers for each type of service for each sector. Bids are awarded on the basis of price, service quality, and the ability of the carrier to provide service. Contracts with carriers cover a one-year period. When contracts are to be renewed, all current providers and other interested providers are invited to bid.

Carriers who wish to provide service to one or more LISTS sectors must bid upon three types of service: direct-line, local-rural or urban, and local-center. One carrier is designated in each sector as the carrier for these types of trips.

Direct-line, local-rural or urban, and local-center service must be bid on a one-way-trip-cost basis. LISTS provides carriers with data on the volume and average monthly vehicle mileage of the previous period's trip requests for each sector to aid them in their bid preparations. LISTS' transportation costs are reimbursed completely by the agencies and the agencies have requested this type of bid for their budgeting activities. With regard to those remaining services for which average trip length cannot be estimated, special-request transportation and cross-sector transportation bids are made by carriers on a per-vehicle-mile basis.

Carriers are required to purchase insurance coverage that meets or exceeds the minimum established by LISTS. These insurance standards are similar to those required by the State of Pennsylvania's Aging Program and include a requirement for \$500,000 single-limit liability and property damage insurance. LISTS carriers must be licensed by the Pennsylvania Public Utilities Commission (PUC). Carriers are also required to have radio communication equipment and working seatbelts in vehicles used for LISTS service.

2.3 PURCHASERS OF LISTS SERVICE

LISTS currently offers service to three groups of purchasers. The largest group purchasing LISTS service is Lancaster County human service

agencies, which use the service to provide trips for their clients. The second largest purchaser of LISTS service is the Red Rose Transit Authority which meets the Federal mandate (Section 504 requirements) to provide service to the handicapped through LISTS. A new and growing group of purchasers are elderly individuals, subsidized in their use of LISTS by a state program funded through Pennsylvania State Lottery revenue. These individuals include both elderly clients of agencies and elderly persons who have no affiliation with an agency. LISTS' arrangements with each of these purchasers are described below.

2.3.1 Human Service Agencies

Agencies contract with LISTS to provide transportation service. According to these contracts, agencies agree to pay LISTS for transportation provided to their clients. LISTS, in turn, is responsible for arranging service delivery and reimbursing carriers for their services. These contracts also stipulate that LISTS must ensure an adequate degree of service quality, including setting service standards and insurance requirements. Because LISTS does not regulate or inspect carrier operations, many of their service standards rely on Public Utilities Commission licensing procedures for enforcement. LISTS monitors the service performance of its carriers by having all complaints about poor quality service forwarded directly to LISTS from the agencies or their clients. In addition, LISTS requires that drivers serving LISTS trips attend sensitivity training sessions, which are conducted by LISTS staff members. These sessions are designed to instruct drivers in providing assistance to those elderly and handicapped riders who require it.

LISTS has developed a fare schedule by which it computes the cost to agencies of service provided (Table 2-1). This fare schedule reflects the carriers' bid prices and a 4 percent surcharge for telephone and ticket printing expenses. It does not include a charge for other LISTS administrative expenses.

LISTS staff have developed special arrangements with the County Department of Public Assistance (DPA) so that DPA clients can use LISTS. Under its Medical Assistance program, the DPA sponsors transportation to medical appointments for its clients. The standard procedure for these trips is that a DPA client will purchase transportation, usually from a taxi company, with his or her own funds. The client will be reimbursed subsequently by DPA for the trip. In many cases, DPA clients and clients of other agencies simply do not have the out-of-pocket cost of the trip available. As a result, their caseworkers have encouraged agencies to associate with LISTS. DPA clients using LISTS do not have to pay fares out-of-pocket, since LISTS charges DPA directly. LISTS staff wanted to work out an arrangement with the DPA because they felt that they could cut DPA transportation costs by bringing some trips into a ride-sharing system.

Two administrative barriers prevented LISTS from serving DPA clients immediately. First, LISTS operates on a ticket system but DPA procedures prevent DPA caseworkers from distributing transportation tickets to clients before a trip is made. Second, the DPA can only issue checks in the name of their clients, after receiving a receipt verifying the amount spent. The department cannot, therefore, issue a check directly to LISTS for transportation services provided.

Working persistently with the DPA, LISTS staff developed procedures whereby DPA clients can now use LISTS. A DPA client wanting to use LISTS must obtain a trip ticket through a participating human service agency. Often, the agency chosen is the Community Action Program (CAP), which provides many services in low-income areas of the county. The issuing agency takes some risk in issuing a DPA ticket, in that the agency is responsible for sponsoring the trip if the DPA refuses to pay. (DPA refusals come most often because a client has been dropped from the Medical Assistance program.) For CAP, this risk is minimal because CAP sponsors many similar trips and would probably sponsor the trip if Medical Assistance were unavailable to the client. Other agencies participate as a public service and many check with the DPA to make certain that reimbursement will be approved.

Clients who obtain an agency-issued DPA ticket must have filed a signed statement with LISTS providing it with the power of attorney. At the end of each month, LISTS invoices the DPA for trips provided to its clients. This invoice lists the name of each client served and the cost of each trip taken. The DPA then issues a check for the total amount spent in service to each individual client, in the name of that client. These checks are sent to LISTS, which it then cashes using the power of attorney statements.

Although this system appears to be complicated, it has worked smoothly since it was put in place. LISTS estimates that approximately 530 trips are provided to DPA clients each month. LISTS has not had difficulty using the power of attorney statements to obtain payment, but it often has a number of DPA invoices outstanding. Within DPA, each caseworker is responsible for issuing checks to his or her clients. When a caseworker delays issuing these checks, or sends the check directly to the client, LISTS must wait to receive payment. Despite this difficulty, the LISTS staff feels the program is well worth the effort because it fills an important transportation need for some county residents.

2.3.2 RRTA Special Efforts Transportation Program

In 1979, the Red Rose Transit Authority initiated a Special Efforts Transportation program, known as the SET program. SET is a user-side subsidy program that reduces the cost of LISTS service to persons unable to use fixed-route transit. Only persons residing in the Lancaster urbanized area

are eligible to use SET. Through the program, the RRTA meets the Urban Mass Transportation Administration's (UMTA) Section 504 requirements for service to the handicapped. The RRTA instituted the program as an alternative to retrofitting its buses with lift equipment.

Under the SET program, handicapped persons can use LISTS to travel anywhere in the Lancaster City sector. Trips outside this area are not eligible for the SET subsidy. SET patrons pay 80 cents for their trip, as of July 1, 1983, which is a fare equivalent to the RRTA two-zone fare. The RRTA pays to LISTS the remainder of the cost of providing the trip. LISTS uses the same fare schedule (Table 2-1) that it uses for human service agencies in charging the RRTA for SET service.

To use SET, handicapped individuals must register for the program at the Office of Aging or a small number of other human service agencies. People who call LISTS about the SET program are directed to one of these sites to register. In its first year of operation, the SET program was limited to medical, work, and food-shopping trips, but it now serves all trip purposes, as required by UMTA to meet Section 504 requirements. Besides the geographical limitation on service, SET trips are provided only during RRTA operating hours. The SET program has historically accounted for only 3 to 4 percent of LISTS' receipts from purchasers.

2.3.3 Pennsylvania's Reduced Fare Program (AdVANce)

Since 1973, the Commonwealth of Pennsylvania has sponsored a free-fare program, funded by revenues from the state lottery, under which persons 65 years or older may ride fixed-route public buses for free during off-peak hours. The program has benefited many elderly persons, but not those who are unable to use fixed-route transit. To address this discrepancy, the Commonwealth initiated in 1981 a program of reduced-fare, shared-ride, demand-responsive transportation. The program provides revenue reimbursement (under Section 203) and limited capital funding (under Section 406) to eligible transportation systems. It is intended to encourage the expansion of demand-responsive systems, particularly in rural areas, and to provide assistance to elderly persons unable to use fixed-route service because of service unavailability or physical disabilities.

The state divides available program funds among counties on the basis of each county's share of the total elderly population in the state, subject to a maximum and minimum grant. In fiscal year 1981-82, the minimum county allocation was \$12,500 and the maximum was \$200,000. Counties have great flexibility in their use of these funds. Generally, the funds may be used to plan, develop, establish, and/or subsidize shared-ride, demand-responsive services. The administrative expenses associated with transportation provision are also eligible for funding under the program. Administrative costs are considered part of the full cost of providing service. Fixed-route service is not eligible to receive funding under this program.

In Lancaster County, applications to the Pennsylvania Department of Transportation for these funds are made by the Lancaster County Board of Commissioners. The Commissioners have designated the Lancaster County Planning Commission, which has in turn designated LISTS as the Reduced Fare Program provider in the county. The county uses its funds primarily to subsidize LISTS trips by eligible individuals. The reduced fare rides are available to all county residents 65 years of age or older who reside more than one-quarter mile from an RRTA bus stop. Persons residing less than one-quarter mile from an RRTA bus stop are expected to continue using bus service. The only exception to this is nonambulatory elderly persons who are eligible to use LISTS under the program regardless of where they live.

LISTS coordinates trips requested under this program, which it has termed the AdVANce program, in a manner very similar to its coordination of other requests. Patrons must call LISTS 24 hours before they wish to travel, and ridesharing is encouraged. The fare schedule for AdVANce trips is shown in Table 2-2. The general public can use the service and pay the full fare. Eligible elderly patrons pay a reduced fare, which is one-quarter of the full fare. The remaining 75 percent is reimbursed by the state. As can be seen in Table 2-2, the fare schedule encourages ridesharing on direct-line trips by decreasing fares rapidly as vehicle utilization increases.

LISTS sets the AdVANce full fare schedule to reflect the actual cost to LISTS of providing service. LISTS adds to the carrier rates a surcharge of between 20 and 25 percent for its administrative expenses. This procedure is different from that used to develop a fare schedule for service to agencies. LISTS charges agencies only for direct transportation expenses; agencies do not contribute to administrative expenses.

Eligible elderly persons can obtain an AdVANce application either through the LISTS office, at an Office of Aging center, or a CAP office. Applicants are required to sign a card indicating their date of birth and to provide their address. Eligible people are sent 10 AdVANce tickets, one of which must be given to the driver for each one-way trip taken.

LISTS has tried to market the program to those persons not served by agencies and as a supplement to agency services. They have designed a brochure and distributed it widely. The LISTS staff has found, however, that reaching those elderly persons not affiliated with human service agencies is a difficult task, particularly in the rural sectors. The Lancaster County population has traditionally had a conservative, independent life-style, and government-subsidized programs are sometimes rejected on philosophical grounds. For this reason, LISTS markets the reduced-fare program as a discount for the elderly rather than as a subsidy.

While LISTS encourages trips by unaffiliated persons, the majority of AdVANce trips are made by agency clients taking agency-sponsored trips. Although the program was developed as a supplement to agency-sponsored transportation, agency trips can be 75 percent subsidized by the program in

TABLE 2-2. LISTS ADVANCE PROGRAM FULL FARES AND REDUCED FARES, BY SECTOR (FISCAL YEAR 1982-83)

Type of Service	Rate Per One-Way Trip												
	Sector 1		Sector 2		Sector 3		Sector 4		Sector 5		Lancaster City		
	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced	
Direct Line													
1 passenger	\$22.45	\$ 5.60	\$20.00	\$ 5.00	\$24.00	\$ 6.25	\$12.50	\$ 3.10	\$22.45	\$ 5.60	\$ --	\$ --	
2 passengers	13.70	3.40	11.85	2.95	18.70	4.70	10.00	2.50	14.35	3.60	--	--	
3 passengers	10.00	2.50	8.75	2.20	15.00	3.75	8.75	2.20	10.00	2.50	--	--	
4-5 passengers	8.10	2.00	6.85	1.70	10.60	2.65	6.25	1.55	8.10	2.00	--	--	
6-7 passengers	6.85	1.70	6.25	1.55	8.75	2.20	4.40	1.10	6.85	1.70	--	--	
8-9 passengers	5.60	1.40	5.00	1.25	8.10	2.00	4.40	1.10	5.60	1.40	--	--	
10+ passengers	4.35	1.10	3.75	.95	6.85	1.70	3.10	.80	4.35	1.10	--	--	
Local Rural and Feeder	3.75	.95	3.60	.90	3.75	.95	3.75	.95	5.75	1.45	--	--	
Local Center	4.05*	1.00*	2.00	.50	3.00	.75	3.55	.90	4.10*	1.05*	--	--	
Local Urban	--	--	--	--	--	--	--	--	--	--	2.80	.70	
Urban Center	--	--	--	--	--	--	--	--	--	--	1.80	.45	

*The fare for local-center trips in Sectors 1 and 5 decreases as trip volume increases.

SOURCE: LISTS.

Lancaster County. Agencies sponsoring trips for clients 65 years of age or older can pay one-quarter of the cost of those trips. This represents a large discount for agencies, as evidenced by the reduced-fare rate for local-center trips, shown in Table 2-2.

2.4 LISTS' ADMINISTRATIVE PROCEDURES

2.4.1 LISTS' Organizational Structure

LISTS is a chartered corporation with a formal set of by-laws. In its articles of incorporation, the purpose of LISTS is described as follows:

The business and purposes of this corporation will be to help meet the special transportation needs of the elderly, handicapped, and low income persons and other citizens of the County of Lancaster by coordinating and/or providing cost-effective transportation services to meet the needs of the various clients.

The business of the corporation is managed by its Board of Directors, consisting of nine to fifteen members. Currently, thirteen people are members of the LISTS Board. One member represents each of the following bodies: Lancaster County, Lancaster City, and the Lancaster County Planning Commission. Other members are drawn from the elderly, handicapped, and low-income populations, human service agencies, transportation providers, and other interested citizens. Each board member is elected for a term of three years and no one can serve more than two consecutive terms. Board members are elected to staggered terms, with one-third of the board elected each year. They are not compensated for their services. The Board of Directors is responsible for LISTS' policy and procedures. Committees coordinate the board in the areas of nominations, evaluation and review, finance, public relations, operations, and personnel. The board directs the hiring of LISTS staff.

The chief operating officer of LISTS is the executive director, who is responsible to the LISTS Board and is the agent through which board policy is operationalized. The director manages LISTS' external activities, primarily carrier contracting, policy-related interactions with agencies, and ensuring adequate funding for administrative activities. The director also manages LISTS' internal operations and supervises the LISTS staff.

There are three LISTS staff members other than the director who perform the daily tasks that keep LISTS operating. A bookkeeper/administrative assistant performs LISTS' accounts receivable and payable functions, prepares LISTS' financial records and operating statistics, and provides information to LISTS' funding sources, the board, and others. Two scheduler/receptionists are the daily point of contact with LISTS for carriers and patrons. These staff schedule trip requests from agencies and agency clients and relay this information to LISTS carriers. The schedulers help clients alter medical appointment times if service is not available when requested or if ride-sharing can be enhanced by schedule adjustment. The schedulers also

answer requests for information about LISTS, its AdVANCE program, and the SET program. In addition, one scheduler manages LISTS' complaint procedures and arranges service for special transportation requests from agencies and other groups. LISTS' scheduling and accounting procedures are described in greater detail below.

2.4.2 Trip Scheduling

LISTS patrons must request service 24 hours in advance of their trip. For patrons requiring a lift-equipped vehicle, trips must be requested 48 hours in advance. Trip requests are not accepted by LISTS after 3:00 p.m. because the schedulers use this period to communicate the following day's trip requests to carriers. Schedulers use a separate transportation request form for scheduling trips in each sector (see Figure 2-2).

Obviously, with LISTS coordinating between 13,000 and 17,000 trips per month, all trip requests cannot be handled by two schedulers. LISTS has developed scheduling procedures that allow two major categories of trips to be scheduled without the involvement of LISTS staff. First, the majority of agency trips are routine trips, composed largely of local-center trips carrying patrons from their homes to Office of Aging centers. The carriers have developed routes along which they routinely pick up and drop off center clients. Only exceptions to this routine network are forwarded by agencies to the carriers, via LISTS. Second, because of the high volume of service requests, most requests for local-urban service are made directly to the Lancaster City sector carrier. Patrons who have made previous local-urban service requests are familiar with this procedure; new patrons often call LISTS directly and schedule future trips with the carrier. Requests for local-rural service and direct-line service are scheduled by LISTS.

LISTS attempts to maximize ridesharing on the trips they do schedule, particularly the long direct-line trips. As noted above, patrons are asked to adjust their travel schedule if their original request requires the use of a vehicle with only one or two passengers. Direct-line trips are made only on a limited number of days each week, depending on the sector. Not every scheduled trip is made, however, when demand is insufficient to justify a trip. As shown in Table 2-1, direct-line trips carrying one or two passengers are very expensive for a sponsoring agency to provide. The agencies and their clients, therefore, cooperate with the LISTS staff, when possible, to reduce trip costs through ridesharing. The difficult task for LISTS is to know when to assist a client in adjusting a medical or other appointment to avoid a vehicle trip with one passenger. If trips are rescheduled too soon, additional trip requests may come in, necessitating the vehicle trip anyway. If LISTS attempts to reschedule trips at the end of the day, patrons' schedules and the schedules of those they are dealing with (e.g., doctors) may be too fully developed for flexibility in timing. This difficulty cannot be easily resolved and typically LISTS uses the period between 1:00 p.m. and 3:00 p.m. to make adjustments in the next day's schedule. Patrons are informed of the likely cost of a direct-line trip when the trip request is made.

LISTS does not schedule return trips for its patrons. The patron informs the driver of his or her desired pick-up time and it is the responsibility of the carrier to schedule the trip. Again, there are exceptions to this procedure. Local-center trips, both to and from the Office of Aging centers, are prescheduled. Clients are brought to the center and returned home at pre-scheduled times conforming to the schedule of activities at each center. Direct-line return trips are also prescheduled. Vans arriving downtown at 9:00 a.m. depart at 11:00 a.m. Vans arriving downtown at 1:00 p.m. depart at 3:00 p.m. Patrons can choose either return time provided that both vehicle trips are being made on the day they use the service.

When LISTS began operation, only a local Lancaster City telephone number was available to patrons who called LISTS. Patrons in rural sectors of the county incurred a long-distance telephone charge by calling LISTS. To remedy this problem, LISTS obtained an "800" toll-free number, which can be dialed free of charge from anywhere in the county. LISTS pays for this telephone system by adding a 4 percent surcharge to carrier bids for the purpose of billing the agencies. The agencies agreed to this surcharge because the telephone system makes it easier for them and their clients to schedule trips.

2.4.3 LISTS Tickets

No one can make a LISTS trip without a LISTS ticket. Patrons obtain LISTS tickets through agencies, in the case of agency-sponsored and SET trips, and directly from LISTS for unsponsored AdvANce trips. Patrons must hand a ticket to the driver when boarding a vehicle. The drivers, in turn, must return all tickets to LISTS to receive payment for service provided.

LISTS produces a variety of tickets, each one indicating the sponsoring agency or program. Six different tickets have been in use since the inception of the AdvANce program: SET tickets, agency-sponsored trip tickets, tickets distributed through agencies for use by Public Assistance clients, tickets for agency-sponsored AdvANce trips, tickets for unsponsored AdvANce trips, and tickets for Office of Aging trips. Figure 2-3 illustrates the AdvANce tickets. Because different sponsors require different information about the trips they are charged for, each type of ticket solicits slightly different information from passengers. The multitude of tickets also helps LISTS sort the tickets when they are returned. The disadvantage of the tickets is that some agencies must correctly process and distribute up to five types of tickets. Ticket printing costs are incorporated into the surcharge LISTS places on carrier bids in creating its fare schedules.

ADVANCE


N° 4001
 AGENCY _____
 CARRIER _____
 NAME _____

LANCASTER INTEGRATED
SPECIALIZED
TRANSPORTATION SYSTEM

AdVANce
ticket
distributed
by Agencies

ADVANCE


ONE-QUARTER FARE

11
 N° _____
 CARRIER _____
 NAME _____
 PASSENGER SS # _____
 O.W.T. COST _____

LANCASTER INTEGRATED
SPECIALIZED
TRANSPORTATION SYSTEM

Non-agency
AdVANce ticket
for general
public over
age 65

ADVANCE


CALL AT LEAST 24 HOURS IN ADVANCE

LANCASTER 291-1234
 EPHRATA/DENVER 445-7288
 MOUNT JOY/ELIZABETHTOWN 653-5751

Reverse side
of both
tickets

SOURCE: LISTS.

Figure 2-3 LISTS TICKETS FOR ADVANCE PROGRAM

2.4.4 Invoicing Agencies and Paying Carriers

LISTS keeps two financial accounts, an administrative account and a transportation account. The administrative account is used exclusively for funding LISTS' administrative activities. Into this account flows revenue from the 4-percent surcharge LISTS attaches to agency-sponsored and SET fares and the administrative cost component of its AdVANce reimbursements from the state. Grants and loans received by LISTS for administration also flow into this account. (LISTS' funding sources are described further below.) LISTS pays for all its administrative expenses from funds in the administrative account.

A second account, the transportation account, allows the transfer of payments by LISTS users to LISTS to the carriers. The transportation account is a zero-balance account; that is, LISTS has no working capital or reserves with which to perform its middleman function. The zero-balance account results in two restraints on LISTS' accounting procedures. First, LISTS cannot subsidize any trips with its own funds. Consequently, any trip that LISTS provides must have a verifiable sponsor. Second, the zero-balance account means that LISTS cannot pay its carrier until it receives sufficient revenue from its users. As will be discussed below, two features of LISTS' accounting system help to modify the effects of its zero-balance system.

Activity in the transportation account begins when a carrier submits an invoice to LISTS for payment. The carrier must submit three types of documents to LISTS -- trip sheets, used tickets, and a bill. The trip sheet, a sample of which is shown in Figure 2-4, provides a record of all carrier activity. Each trip recorded on a trip sheet must be matched by a LISTS ticket. From the tickets and the trip sheet, carriers develop an invoice, which they submit to LISTS typically at the end of each month.

When LISTS receives carriers' invoices, staff check the trip sheets, tickets, and invoices for consistency. LISTS does not pay a carrier for a trip if a ticket is not returned. Using this information, LISTS staff completes a cost breakdown by agency. A sample cost breakdown is shown in Figure 2-5, illustrating how LISTS records the number of trips provided for each user account by each carrier. For each human service agency contracting with LISTS, a separate record of fully sponsored trips and partially sponsored AdVANce trips is kept. At the end of each month, LISTS submits invoices to sponsoring agencies and programs listing total one-way trips sponsored, passenger receipts, if any, and the applicable administrative surcharge. LISTS also returns the cancelled trip tickets to the agencies. LISTS must prepare a special invoice to the Pennsylvania DOT for reimbursement for AdVANce trips.

LISTS has not had any significant problems with the timing of payments by agencies, who typically reimburse LISTS for service within 30 days. A number of small accounts are usually outstanding, often involving trips where the agency's sponsorship is in dispute. These outstanding accounts total less than \$1,000, or 0.3 percent of total LISTS agency receipts.

DAILY TRIP SHEET

CARRIER COLUMBIA TAXI

ODOMETER START _____

DATE SEPT 1, 1982

DRIVER DENNIS

FINISH _____

TOTAL COST 31.80

TOTAL HOURS _____

DEADHEAD 35

TOTAL PASS. 16

SEATS _____

SCHEDULED PICK-UP TIME	NAME	ADDRESS	DESTINATION	ACTUAL PICK-UP TIME	TIME OF ARRIVAL	ODOMETER AT PICK-UP	ODOMETER AT ARRIVAL	AGENCY	FAR
C	Schoewenberger	T. HOUSE	HOSPITAL	9:00	9:06	500.3	501.4	LISTS	1.95
C	Propst	T. HOUSE	DR LANDIS	9:42	9:46	506.3	507.0	"	1.55
C	RATHKEY	204 W MAIN ST	JAMESWAY	10:15	10:21	513.8	516.4	01.95 OOA	3.25
C	RATHKEY	JAMESWAY	204 W MAIN ST	11:03	11:08	519.2	521.6	01.95 OOA	3.15
C	BLUMENSHINE	538 FRANKLIN ST	DR CHERN	1:18	1:24	534.6	536.0	LISTS	2.15
	Rhinier	QUARRY TERRACE	DR. HERNANDEZ	1:59	2:06	545.0	546.7	AAA(W)	2.45
C	BLUMENSHINE	DR. CHERN	538 FRANKLIN ST	2:10	2:16	546.9	548.0	LISTS	2.05
C	MINNICH	DR. CHERN	923 Spruce St	2:24	2:29	550.0	550.4	OOA	1.25
	Rhinier	DR. HERNANDEZ	QUARRY TERRACE	2:26	2:35	550.2	552.1	AAA(W)	2.55
	Groff	RTE AIDE	CENTER	9:55	9:59	392.2	392.7	01.95 OOA	1.35
C	Propst	DR. LANDIS	T. HOUSE	10:20	10:24	397.8	398.5	LISTS	1.55
C	KEISER	T. HOUSE	BANK	10:35	10:40	400.5	401.0	"	1.45
C	KLUGH	T. HOUSE	DR. ROMANO	10:45	10:50	401.8	402.8	"	1.85
C	KLUGH	ROMANO	T. HOUSE	10:51	10:56	402.8	403.7	"	2.05

SOURCE: LISTS.

Figure 2-4. LISTS CARRIER DAILY TRIP SHEET

Carrier COLUMBIA

DAILY COST BREAKDOWN

Month SEPTEMBER

Date	Trips	Org. Wht.		AAA	CAP	LGC	DPA	LGC-E
		PDot	PDot					
9-1	2							
9-2	4		1.0	10.30	3.40			
			1.0	16.85	5.60			
9-7	7	3.0	7.50					
9-8	2	3.0	16.85	3.0	5.60			
9-9	4	3.0	10.30					
9-14	6	1.0	10.30	1.0	16.85	1.0	5.60	
		1.0	7.50	1.0	2.50			
9-15	2	2.0	16.85	2.0	5.60			
9-16	6	3.0	7.50	1.0	16.85	1.0	5.60	
		1.0	7.50	1.0	2.50			
9-17	2						2.0	11.00
9-21	8	3.0	7.50	3.0	2.50			2.0
								7.50
9-22	2							2.0
								18.00
9-23	10	3.0	1.0	1.0	6.10	5.10	2.00	2.0
		1.0	16.85	1.0	5.60			6.50
9-24	2							2.0
								12.00
9-27	2							2.0
								18.00
9-28	8	4.0	7.50	4.0	3.50			2.0
								7.50
9-29	2							2.0
								12.00
9-30	8	1.0	7.50					2.0
		1.0	6.10					7.25
								16.0
						2.0	11.00	13.09
						3.0		13.61
						10.60	11.44	

SOURCE: LISTS.

Figure 2-5. LISTS DAILY COST BREAKDOWN FORM

As noted earlier, LISTS does not pay its carriers until it receives payment from trip sponsors. For the carriers, this procedure means that payment for trips provided early in a month is not received until two months later. This process can be accelerated slightly if carriers submit invoices to LISTS more frequently than the end of each month. The procedure does occasionally cause cash-flow problems for the smaller carriers. In recognition of this, the Office of Aging provides LISTS with a \$16,000 advance at the start of each fiscal year. LISTS distributes \$14,000 of these funds to carriers, with the use of the money left to the carrier's discretion. Two carriers indicated that they used these funds for major vehicle maintenance and/or acquisition. The Office of Aging recoups its advance in two installments of 50 percent each at the end of the fifth and tenth months. LISTS debits the carrier one-tenth of the advance for ten consecutive months.

The remaining \$2,000 from the Office of Aging advance is used by LISTS as working capital. The advance allows LISTS a small degree of flexibility in paying carriers and carrying outstanding agency accounts. If agency invoicing is delayed or payment is slow, the advance allows LISTS to make some payment to carriers. This payment may be critical to the smaller carriers, which have only a small amount of working capital themselves. This system works fairly smoothly until the end of the fiscal year, when LISTS must repay the \$2,000 advance to the Office of Aging. Between this repayment and the next year's advance, LISTS' only source of working capital is the administrative surcharge added to each account. The surcharge revenue flows first into the transportation account as agencies pay their invoices. LISTS subsequently transfers these funds to the administrative account. The timing of this transfer is crucial. The longer LISTS leaves these funds in the transportation account, the more working capital is available for transportation expenses. Of course, the length of time LISTS can wait before transferring the funds to the administrative account is constrained by the timing of its administrative accounts-payable.

2.5 LISTS' ADMINISTRATIVE COSTS AND FUNDING SOURCES

The largest portion of LISTS' administrative expenses is comprised of wages. As shown in Table 2-3, wages accounted for approximately 53 percent of LISTS' expenses in fiscal year 1981-82. The LISTS toll-free telephone system was the next-largest expense, comprising 9 percent of administrative costs. Office rental accounted for less than 4 percent of total expenses, partly because LISTS rents modest space in the county courthouse. Table 2-3 also lists expenses related to LISTS' lift-equipped vehicle, the maintenance of which has been very expensive. This vehicle, which LISTS rents to its carriers, is discussed in Section 3 of this report.

TABLE 2-3. EXPENSE CATEGORIES FOR LISTS ADMINISTRATIVE ACCOUNT
(PERCENTAGE OF CATEGORIES FOR FY 1981-82)

	<u>PERCENT</u>	<u>DOLLARS</u>
Wages	53.2	\$35,600
Payroll Taxes	7.0	4,684
Insurance-office	5.8	3,881
Insurance-lift-vehicle	3.4	2,275
Office supplies	2.1	1,405
Postage	.6	402
Printing	3.6	2,409
Office-other	.6	402
Rent	3.6	2,409
Telephone	9.1	6,089
Travel	.6	402
Advertising	.9	602
Legal and professional	1.4	937
Depreciation	1.2	803
Lift-vehicle maintenance	4.2	2,810
Van lift-vehicle rental	2.6	1,740
Miscellaneous	<u>.1</u>	<u>67</u>
Total Administrative Expenses	100.0	\$66,917

SOURCE: Audit Reports for LISTS, Statement of Revenues and Expenditures, and calculations by Charles River Associates, 1983.

LISTS' administrative expenses accounted for 15.6 percent of total LISTS costs (administrative and transportation expenses) in fiscal year 1981-82. As shown in Table 2-4, this percentage was lower in previous years, before LISTS purchased the lift-equipped vehicle. These percentages compare favorably to other brokerage projects. For example, the administrative costs as a percentage of total costs for ACCESS, the paratransit broker in Allegheny County, Pennsylvania, were 29 percent in fiscal year 1980, 17 percent in fiscal year 1981, and 15 percent in fiscal year 1982.*

To fund its administrative expenses, LISTS has relied to a large extent on governmental grants. Table 2-5 lists the percentage of LISTS' administrative funds by source between 1977 and 1982. In LISTS' first year of operation, its administrative expenses were funded almost entirely through two grants, one from the Pennsylvania DOT and the second from the RRTA. During its second year of operation, LISTS received its major funding from the Redevelopment Authority of Lancaster County. The Redevelopment Authority allocated to LISTS part of Lancaster County's Community Development Block Grant (CDBG) funds, which is a Federal grant administered by the U. S. Department of Housing and Urban Development (HUD). To receive this money, LISTS must prepare documentation concerning the number of LISTS patrons residing in HUD-designated neighborhood services areas. In fiscal year 1981-82, LISTS also received CDBG funds through the City of Lancaster, which receives HUD monies separately from the county.

In 1979 LISTS began to add the 4 percent surcharge to its transportation charges, and this surcharge has provided a growing portion of administrative funds. In fiscal year 1981-82, the surcharge provided 24.3 percent of LISTS' administrative funds. The Pennsylvania DOT reduced-fare program is also providing a growing source of administrative funds for LISTS. In fiscal year 1981-82, the broker received 8.7 percent of its administrative funds through AdVANce service provision. The state also provided an additional 1.2 percent of LISTS funds through a Section 406 planning grant. Because the number of trips taken under the program increased dramatically in the 1982-83 fiscal year, a higher portion of LISTS' administrative expenses will be funded by the AdVANce program in that period. Together, the LISTS surcharge and the AdVANce program have reduced LISTS' reliance on annually-funded grant programs to the extent that LISTS may not have to use its entire CDBG allotment in 1982-83.

*Charles River Associates, ACCESS: Brokering Paratransit Services to the Elderly and Handicapped in Allegheny County; prepared for the U.S. Department of Transportation, Transportation Systems Center, 1983.

TABLE 2-4. AVERAGE MONTHLY LISTS COSTS FOR FISCAL PERIODS 1977-82

<u>Fiscal Period</u>	<u>Average Monthly Administrative Costs*</u>	<u>Average Monthly Transportation Costs**</u>	<u>Percent Administrative Costs Of Total Costs</u>
Nov. 77-Dec. 78	\$3,051.41	\$11,358.59	21.2%
Jan. 79-Sept. 79	\$3,145.02	\$18,216.28	14.7%
Oct. 79-June 80	\$3,735.94	\$28,563.14	11.6%
July 80-June 81	\$4,876.93	\$32,805.45	12.9%
July 81-June 82	\$5,576.42	\$30,087.58	15.6%

*The total fiscal period administrative costs divided by the number of months in that period produced the average monthly costs: (14 months for 77-78, 9 months for 79, 9 months for 79-80, 12 months for 80-81, 81-82).

**The total fiscal period disbursements to contracted carriers divided by the number of months in that period produced the average monthly transportation costs.

SOURCE: Audit Reports for LISTS (December 1978, October 1979, June 1980, August 1981, June 1982) Statement of Revenues and Expenditures, and calculations by Charles River Associates, 1983.

TABLE 2-5. PERCENTAGE OF ADMINISTRATIVE ACCOUNT RECEIPTS
BY SOURCE FOR FISCAL PERIODS 1977-82

<u>Sources</u>	<u>Nov. 77- Dec. 78</u>	<u>Jan. 79- Sept. 79</u>	<u>Oct. 79- June 80</u>	<u>July 80- June 81</u>	<u>July 81 June 82</u>
Pennsylvania Dept. of Transportation	81.7%	14.6%	.3%	---	---
County of Lancaster	14.6	---	---	---	---
Redevelopment Authority - County of Lancaster	---	73.9	75.2	70.2	48.1
City of Lancaster - Community Development Block Grant	---	---	---	---	13.9
Pennsylvania Dept. of Transportation Section 406 funds	---	---	---	---	8.7
Planning Grant - Section 406 Funds	---	---	---	---	1.2
Administrative Charges from Transportation Account	---	8.8	21.8	20.9	24.3
Other Refunds and Reimbursements	3.1	2.5	2.6	2.1	.9
Vehicle Rental	---	---	---	6.2	1.6
Interest Income	.6	.2	.1	.7	1.4
Total Receipts	\$33,975	\$28,440	\$36,299	\$63,769	\$74,437

SOURCE: Audit Report for LISTS, Statement of Revenues and Expenditures, and calculations by Charles River Associates, 1983.

3. IMPACT OF THE BROKER ON THE SUPPLY OF SPECIALIZED TRANSPORTATION

3.1 INTRODUCTION

As a transportation broker, LISTS is a facilitator of transactions in the market for specialized transportation service. Unlike some transportation brokers, LISTS does little beyond the definition of specific geographical service sectors to directly regulate or otherwise shape the supply of service. This role, however, does not preclude LISTS from influencing the amount, type, and cost of service available. In fact, LISTS was implemented by the County specifically for the purpose of achieving cost savings through the coordination of specialized transportation resources.

In this section, we look at the changes that have occurred since the introduction of LISTS in the supply of specialized transportation services in Lancaster County. First, we review the characteristics of paratransit supply prior to LISTS. We consider the transportation services available to human service agencies and we identify the areas where county transportation planners believed supply improvements were possible. Next, we examine the transportation services available to agencies that do business with LISTS and assess the extent to which anticipated improvements in supply have occurred. Finally, we consider some of the ongoing difficulties faced by the broker as a middleman in search of both low-cost and high-quality service.

3.2 SUPPLY OF SPECIALIZED TRANSPORTATION SERVICE BEFORE LISTS

Prior to LISTS, the majority of Lancaster County human service agencies filled their need for specialized transportation without purchasing service from outside vendors. An inventory undertaken by the Lancaster County Planning Commission (LCPC) documents the arrangements of agencies prior to the formation of LISTS (see Table 3-1).^{*} Of the 15 human service agencies contacted, 14 owned or operated agency vehicles. Of these 14, 9 used volunteer drivers in agency vehicles to transport clients. Nine agencies, including one agency that owned no vehicles, used volunteers driving their own vehicles to transport clients. Only four agencies (the Community Action Program [CAP], the Office of Aging, Brethren Village, and Goodwill Industries) operated vehicles without the assistance of volunteers. Of the 15 agencies

^{*}Lancaster County Planning Commission, Rural Public Transportation Study, 1977.

TABLE 3-1. TRANSPORTATION CHARACTERISTICS OF
LANCASTER COUNTY SOCIAL SERVICE AGENCIES -- 1977

	Role											
	Owms/Operates	Contracts w/ Carrier	Volunteer Vehicles	Volunteer Drivers	Reimburse Clients	Only Agency Clients Eligible	Evening Service Offered	Weekend Service Offered	No. of Vehicles Owned	Purpose Restricted	Charge Fare	Accept Donations
1. Community Action Program	X							X	5			
2. Ephrata Area Social Services	X		X	X		X			1	X		X
3. Goodwill Industries	X		X	X			X		1		X	X
4. Lancaster Association for Retarded Citizens	X		X	X		X			0			
5. Lancaster Multiple Sclerosis	X		X	X					1			X
6. Lancaster Information Center	X	X	X	X		X			5			X
7. S. June Smith Center	X		X	X	X				2			X
8. United Cerebral Palsy	X	X	X						3			
9. Lancaster Office of Aging	X								2			X
10. Lancaster Recreation Commission	X		X	X		X			1			
11. Municipal Office of Manpower	X		X	X		X			4	X		X
12. Calvary Fellowship Homes	X			X		X			2	X		X
13. Brethren Village	X			X		X			1			
14. Landis Homes	X			X		X			2	X		X
15. Lutheran Social Services	X		X	X		X			1	X		
TOTAL	14	2	9	10	1	8	1	1	30	4	2	7

SOURCE: Lancaster County Planning Commission, 1977. Rural Public Transportation Study. March. Pp. 13a-13c.

inventoried, 2 contracted with private carriers to provide service and one of these, the Office of Aging, used these carriers in conjunction with its own vehicles. Other agencies reported having once used private carriers but claimed to have discontinued the practice because of the high cost or driver insensitivity to riders' needs.

All of the agencies included in the inventory provided transportation on Monday through Friday. Most agencies, though, placed limitations on the service provided. Eleven of the agencies served only one client group, reflecting either restrictions placed on the use of funds received from Federal agencies or a single-program orientation. Most restricted the purposes for which they provided transportation, and only two provided transportation to work. Only one agency provided transportation to its clients during evening hours. Most of the agencies did not charge a passenger fare but seven organizations accepted donations.

There are no exact figures available concerning the total number of vehicles operated by agencies prior to LISTS. The LCPC estimates on the basis of two surveys that 107 vehicles were operated by non-profit or government human service agencies in 1977. Of the vehicles owned by the 15 agencies involved in the LCPC inventory, only one out of a total of 27 was lift-equipped. The Commission also estimates that approximately 68 vehicles were operated by nursing homes, both for the purpose of transporting clients and for administration. Available to the agencies and nursing homes were a large number of vehicles owned by private taxi companies. Although seldom involved in agency transportation, approximately 45 sedans, 47 station wagons, 35 vans, and 9 limousines were at the disposal of private carriers. Of these vehicles, three were ramp- or lift-equipped.

The LCPC's Rural Public Transportation Study provides information on the cost of service to human service agencies prior to LISTS. Working with seven agencies, the LCPC staff developed estimates of the cost incurred by each agency in transporting clients on one of their vehicles. Table 3-2 presents the cost summary prepared by the agencies and the LCPC. At the bottom of the table, summary statistics are provided. It can be seen that the total cost per mile of service ranged from \$0.42 to \$0.81 among the seven agencies. The total cost per passenger also varied widely, ranging from \$0.99 to \$4.06. Higher costs per passenger tended to occur either in agencies that had to transport clients long distances (CAP-Rural Outreach), or in agencies with limited numbers of eligible clients (United Cerebral Palsy). The average cost per passenger trip for all seven agencies was \$2.11 (when weighted by the number of passengers served by each agency).

Prior to LISTS, the Red Rose Transit Authority offered free service to the elderly and one-half fare service to the handicapped during off-peak hours. As shown in Figure 3-1, many rural areas of the county received little or no bus service. Not shown on this map are the numerous RRTA bus

TABLE 3-2. AVERAGE COST OF AGENCY-OPERATED VEHICLES (1976-77)

	<u>Line</u>	<u>CAP Rural Outreach</u>	<u>United Cerebral Palsy</u>	<u>S. June Smith Center</u>	<u>Area Agency on Aging</u>	<u>CAP Head Start</u>	<u>Goodwill</u>
Vehicle Costs							
Depreciation	\$ 1,674	\$ 1,554	\$ 1,416	\$ 1,744	\$ 1,331	\$ 1,574	\$ 1,500 (est.)
Tax insurance	(included in vehicle operating costs)	163	265	216	285	183	307
Vehicle Operating Costs	2,205	1,453	569	889	1,420	1,745	1,951
Administrative and Management Costs	3,683	2,739	4,056	1,399	4,005	2,527	2,879
Driver Costs	6,090	5,950	1,902	3,088	4,617	5,535	5,647
Total	\$13,652	\$11,859	\$8,208	\$7,336	\$11,401	\$11,564	\$12,334
Total Cost/Mile (\$)	.55	.52	.50	.42	.81	.63	.62
Total Cost/Passenger (\$)	1.72	4.06	2.56	2.05	3.68	.99	2.14
Miles/Passenger	3.11	7.78	5.14	4.86	4.54	1.57	3.47
Admin. Cost/Total Cost (\$)	.27	.23	.49	.19	.35	.22	.23
Driver Cost/Total Cost (\$)	.45	.50	.23	.42	.40	.48	.46

Note: The statistics in this table were obtained by dividing agency statistics related to the total transportation effort by the number of vehicles in operation. The average total cost per passenger is \$2.11 when the average cost of each agency is weighted by the number of passengers served by that agency.

SOURCE: Lancaster County Planning Commission. 1977. Rural Public Transportation Study. Page 34.

routes serving Lancaster City. The RRTA operated a total of 19 routes in 1977 and one study estimated that the elderly comprised 34 percent of total RRTA ridership.*

Before LISTS, the RRTA did not offer special services to handicapped persons residing in its service area. Having to meet the U.S. Department of Transportation's requirements for service to the handicapped, the RRTA was an active participant in planning for LISTS. As an alternative to retrofitting county buses with lift equipment, the RRTA wanted to operate a specialized service for the handicapped.

LISTS was the result of an extensive planning effort by the county. As noted in Section 1 the county's Rural Public Transportation Study identified a number of service inefficiencies in the uncoordinated human-service-agency transportation network. Among these inefficiencies were route duplication, vehicle-size restrictions, low vehicle utilization, and a lack of coordination with the fixed-route system. The study also noted the desirability of combining resources for RRTA special services with the human service agency resources. It was determined that coordination was the method by which significant cost savings could be achieved for both the agencies and the RRTA.

The planning study recommending the creation of LISTS also recognized the disadvantages of coordination. The study found that:

The goals related to operational efficiency achieved by integrating specialized service can be stated in the following way: (A) minimize the number of miles vehicles travel in serving a given group, (B) minimize the amount of time which drivers spend idle, and (C) minimize the amount of time which vehicles are idle... In general, as more passengers are carried on each vehicle throughout the course of the day, the goals are more nearly satisfied...

The quality of service that a particular person receives in door-to-door transportation is often inversely related to the quality of service enjoyed by fellow passengers... The quality of service a passenger receives is also inversely related to the number of other persons served on the same vehicle. Thus, by maximizing the number of persons carried on a vehicle at one time, the system is constrained by the minimum quality of service that is acceptable to clients.**

*Lancaster County Planning Commission, Elderly and Handicapped Transportation Study, 1978, p. 26.

**Lancaster County Planning Commission, Rural Public Transportation Study, 1977, p. 24.

The task force organized to design a coordinated system was sensitive to the trade-off between cost and service quality. As discussed below, this trade-off forms an integral part of the balancing act the broker must play in matching supply and demand.

3.3 SUPPLY OF SPECIALIZED TRANSPORTATION SERVICE AVAILABLE THROUGH LISTS

In this section we compare the characteristics of specialized services available to human service agencies prior to LISTS and after the introduction of LISTS. Before we begin this comparison, however, it is worth noting that LISTS was seen as a replacement for agency-operated services rather than as an alternative service. At the time of its introduction, many agencies were experiencing large cuts in their transportation budgets and finding it difficult to maintain their own fleets. The Community Action Program's Rural Outreach (which served CAP and other agencies) was in the process of phasing out its transportation services, leaving a number of agencies entirely without service. Private carriers were one option available to the agencies, but because of previous experiences, many agencies were concerned that without coordination service quality would be too low and costs too high. Thus, in one sense, LISTS service represents not just a change in supply conditions but also the creation of a satisfactory replacement for a breakdown in the human service agency transportation network.

It should also be noted that the RRTA was considering the elimination of several of its rural routes, expecting that many of the elderly persons using these routes would be able to use LISTS. The RRTA has since eliminated Route #14 to Strasburg and that part of Route #15 to Quarryville that is outside of the urbanized area (see Figure 3-1). LISTS' patronage in Sector 5 has increased as a result of this action.

3.3.1 Service Availability Issues

With LISTS, the days on which service is available to human service agencies have not changed significantly, except in Lancaster City. In the five rural sectors, LISTS service is available Monday through Friday. Evening and weekend service is also available by special request. These arrangements correspond to the days of operation of agency services prior to LISTS. In the Lancaster City sector, LISTS service is available to agencies seven days a week. This represents an increase in service availability to agencies providing trips inside the city sector. It is not known, however, how many agency trips are actually provided in Lancaster City on the weekends.

LISTS may, however, have had a negative effect on service availability for certain types of trips. Direct-line service is available only two or three days each week, depending on the sector. The services are provided on the same days each week, if there is a demand for service. Prior to LISTS, agencies controlled directly the provision of service and could choose the days on which this type of trip would be made. Using LISTS, therefore, may result in an agency's having to schedule its client trips around LISTS' schedule rather than vice versa.

Another negative effect LISTS may have had on service availability is the result of trip scheduling procedures. All requests for service must be received by LISTS or the appropriate carrier by 3:00 p.m. the day before service is desired. Agencies who discover a need for next-day service after 3:00 p.m. may not be served. In contrast, when using their own vehicles, the agencies could continue to schedule trips until a vehicle left the agency. When volunteers were used, scheduling flexibility varied according to the volunteer and the situation.

These possible negative effects must be weighed against LISTS' positive impact. The first positive effect results from LISTS' extended network of private carriers, which enables it to satisfy almost all agency trip requests. With LISTS, the agencies are not subject to a loss of service when a vehicle breaks down or a volunteer cannot meet a commitment.

Another positive effect of LISTS is that agencies do not have to constrain their own demand for service in order to achieve service economies. One agency reports that prior to LISTS it restricted its sponsorship of medical trips to one day a week in an attempt to increase ridesharing. Because LISTS combines its trips with trip requests from other agencies, this agency no longer finds it necessary to restrict its own sponsorship to one day. With LISTS' direct-line service, the agency can obtain a satisfactory level of ridesharing while sponsoring medical trips on more than one day.

3.3.2 Driver Assistance and Continuity

Among the reasons cited by agencies for providing their own transportation service is that agencies can provide a higher level of driver assistance and driver continuity than private transportation companies can. Many agencies fear the rapid personnel turnover commonly associated with urban taxi companies. Others have experienced situations where they felt a driver could have been more sensitive to the needs of elderly or handicapped clients.

The LCPC inventory of human service agencies providing transportation in 1977 indicates that all agencies provided door-to-door service for their clients at that time. In addition, these agencies reported that the drivers

of the vehicles they used assisted passengers as necessary.* Because most agencies provided service in their own vehicles or through volunteers, it is likely that there was a high degree of driver continuity.

LISTS has attempted to maintain these standards of driver assistance and continuity; it requires its carriers to send all drivers involved in LISTS service to a driver sensitivity training session. Because LISTS does not reimburse carriers for expenses associated with sending drivers to the training, carriers have an incentive to maintain stability in their LISTS-related personnel. LISTS staff report that continuity among van drivers has been very good. Turnover and the distribution of work assignments, however, make it difficult to achieve continuity among taxi drivers serving LISTS trips. Because taxis are rarely used outside the Lancaster City sector, agencies in the rural sectors have experienced a fairly high degree of driver continuity.

LISTS requires that drivers offer door-to-door assistance to patrons when such assistance is needed. Similarly, LISTS requires that carriers' drivers offer assistance to passengers with packages when needed. LISTS obviously cannot enforce these requirements directly. The broker does, however, monitor and follow up on all complaints raised by agency passengers about the service they receive. LISTS informs the agencies of the services their clients are entitled to receive but does not give this information directly to the clients.

LISTS does not provide escorts; it relies on the agencies to determine when an escort is needed by a client. LISTS requests that agencies inform the staff when an escort will accompany a client so that the carrier can allow the escort to travel with a ticketed client free of charge.

3.3.3 Vehicle Availability

With LISTS, the variety and number of vehicles available to human service agencies have greatly expanded. The number of wheelchair-accessible vehicles available has also increased, but there are still many problems with the provision of accessible service.

LISTS carriers own a variety of transportation equipment, some of which is used for LISTS service. Two of the four contracted carriers serving LISTS in the 1982-83 fiscal year also operate equipment for other transportation accounts and are able to bring this equipment into service for LISTS if necessary. For special transportation requests, LISTS is able to call all

*Lancaster County Planning Commission, Rural Public Transportation Study, 1977, p. 13c.

carriers for bids, including carriers not currently under contract to the broker. These requests occasionally bring the resources of up to four additional carriers into service for county agencies.

The type of equipment available to LISTS-affiliated agencies varies by sector. In fiscal year 1982-83, the Lancaster City sector was served by Friendly Taxi Company, which routinely uses 3 15-passenger vans, 7 7-passenger Checker cabs, and 7 5-passenger sedans in providing LISTS service. One of Friendly's vans is ramp-equipped and is used primarily to provide SET trips. Sector 1 was served by Columbia Taxi Company in 1982-83. Columbia operates 1 9-passenger station wagon and 2 5-passenger sedans. Columbia uses these vehicles for LISTS trips and its other (non-LISTS) patrons. Sectors 2, 3, and 4 were served by one carrier in 1982-83, Lancaster Limousine Service, Ltd. Lancaster Limousine served LISTS patrons in these sectors using 4 15-passenger vans, 4 12-passenger vans, an 8-passenger van, a station wagon, and a sedan. Lancaster Limousine operates no lift- or ramp-equipped vehicles. Sector 5 was served by Cisney's Van Service, which operates a 15-passenger van, 3 12-passenger vans, and a station wagon. None of Cisney's vans is ramp- or lift-equipped.

In 1980, the Lancaster County Office of Aging purchased two lift-equipped vehicles to supplement LISTS' fleet. At that time, as in 1982-83, only one ramp-equipped vehicle was operated by a LISTS carrier. The Office of Aging purchased the vehicles and currently leases them to LISTS for use in serving Office of Aging clients. LISTS carriers can rent these vehicles from the broker, at the rate of \$2.00 per hour, to provide accessible service to clients of any human service agency. The vehicles are 14-passenger Dodge Maxivans[®], equipped with a wheelchair lift and 3 wheelchair stations.

The vehicles are stored at a County-owned facility in Lancaster City, a central location where they are available to all rural-sector carriers. To use a vehicle, however, a carrier must send a driver to the city to get a van and then later back to return it. The most active user of the vans is Friendly Taxi, which has headquarters in Lancaster City. Friendly uses the vehicles mainly to supplement its own ramp equipment, which is often in use for SET service.

LISTS' experience with this arrangement has not been entirely positive. While the vehicles are accessible equipment available to the carriers, the carriers do not like to use the equipment. Two carriers who originally took the equipment for regular use found them to be unprofitable due to the high monthly amortization fee they were obligated to pay LISTS and because of the high maintenance and fuel costs. As a result, the carriers returned the vehicles to LISTS and terminated their payments. LISTS now carries the cost of these vehicles. In fiscal year 1981-82, as shown in Table 2-3, 3.4 percent of LISTS' administrative expenses were for insurance on the vehicles, 4.2 percent was for vehicle maintenance, and 2.6 percent was for vehicle rental. The total cost of the vehicles to LISTS in fiscal year

1981-82 was \$6,826. As shown in Table 2-5, 1.6 percent of LISTS' revenue of \$74,437, or \$1,191, was received from carriers renting the vans from LISTS. With this offsetting revenue, LISTS contributed \$5,635 of its administrative funds to ensuring accessible-vehicle availability.

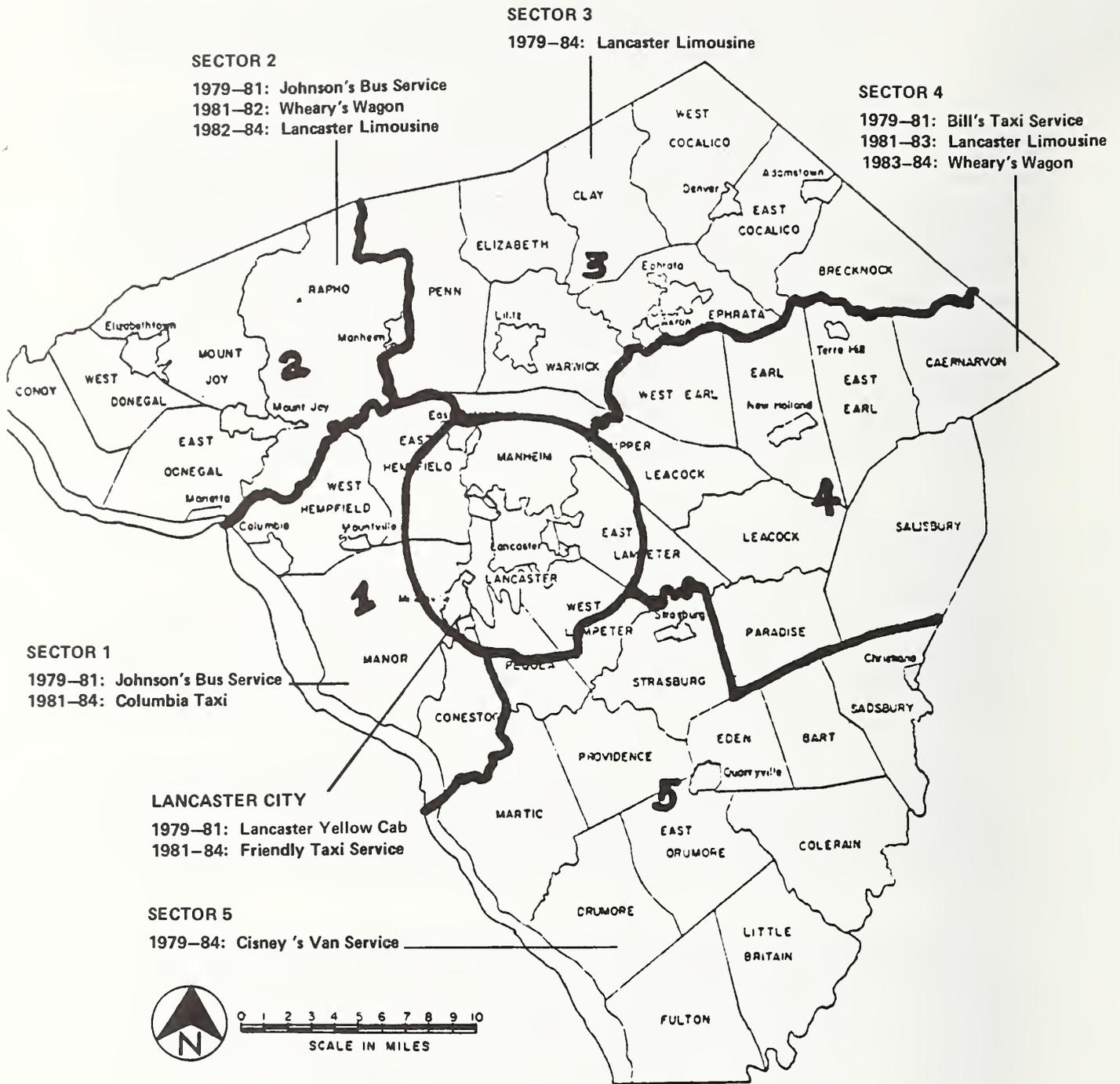
On the whole, then, LISTS makes more equipment available to agencies on a demand-responsive basis than the agencies had available to them before. Because of its contracts with some carriers and ongoing relationships with other carriers, LISTS can meet the vehicle needs of the agencies it serves. One exception to this general conclusion must be noted, however, with regard to the availability of lift-equipped vehicles. LISTS has made a strong commitment to having accessible equipment available but it has been unsuccessful in providing an incentive for carriers to use it. Carriers complain about the excessive cost of the equipment, due in part to pick-up and drop-off expenses, and also to the fact that they find the vehicles to be less fuel-efficient than other vans. Whenever possible, they serve nonambulatory passengers in sedans, with the wheelchair collapsed in the vehicle. Because of this, some people in the county claim that LISTS has had difficulty attracting agencies that serve nonambulatory clients.

3.3.4 Competition and LISTS' Transportation Costs

A key factor in LISTS' efforts to maintain the lowest possible transportation costs given its service standards is competition among carriers. LISTS relies on competition to force carriers to be as efficient as possible in serving LISTS trips so that another carrier will not be able to underbid them in the next contracting round. LISTS opens its sectors to competitive bidding annually, at that time sending its request-for-bids package to every appropriately PUC-licensed carrier operating in the county.

As shown in Figure 3-2, four of LISTS' six service sectors have been served by more than one carrier. Lancaster City and Sector 1 changed hands in fiscal year 1981-82 and have since been served by one carrier. Sectors 2 and 4 have been served by three different carriers since 1979. Only Sectors 3 and 5 have been served by the same carrier since the introduction of LISTS.

The latest round of contracting (for fiscal year 1983-84) illustrates the level of competition typical in the LISTS network. Two carriers, Friendly Taxi Company and Lancaster Yellow Cab, bid on the Lancaster City Sector. Two carriers, Friendly Taxi Company and Lancaster Limousine Service, bid on Sector 2. Lancaster Limousine was unchallenged in its home base, Sector 3. In Sector 4, Lancaster Limousine and Wheary's Wagon both bid to provide service, and in Sector 5, Cisney's Van Service was the only bidder. This competition marked the first time that Friendly Taxi Company bid outside Lancaster City and the first time that Wheary's Wagon bid in Sector 4. These types of challenges make the LISTS staff confident that no



SOURCE: LISTS

Figure 3-2. LISTS CARRIERS BY SECTOR, 1979-1984

carrier feels safe from competition. In interviews for this case study, all carriers expressed the belief that unless they maintained an efficient operation, they would lose their LISTS contracts in a competitive bid.

As shown in Table 3-3, LISTS disbursements for transportation service have gone to 10 different carriers since January 1978. Some carriers have become more important in the LISTS network over time, while others have become less important. In fiscal year 1981-82, LISTS' largest carrier in terms of transportation revenue was the Friendly Taxi Company. Friendly received 32 percent of LISTS' total disbursements.

A major reason for LISTS' success in attracting carriers to its network is that its service can form a major portion of a carrier's business. For the County's application to the Pennsylvania DOT, the Lancaster County Planning Commission asked carriers serving LISTS at the time (June 1981) to estimate their total ridership, broken down by LISTS riders and all other riders. The numbers produced, shown in Table 3-4, reveal the importance of LISTS service to these carriers. Carriers in Sectors 3, 4, and 5 were dependent on LISTS for more than 80 percent of riders in 1980-1981. The Lancaster City carrier, Lancaster Yellow Cab, had the lowest proportion of LISTS trips at 48.8 percent. This is a surprisingly high percentage, however, for an urban taxicab company. For some carriers, it appears that the loss of a LISTS contract could result in cessation of operations.

The reasonable cost of transportation service through LISTS provides persuasive evidence that LISTS has been able to use competitive forces to restrain costs. Table 3-5 lists the average number of trips served each month by LISTS and the average cost per trip for fiscal periods 1977-82. As can be seen, agency usage of LISTS started slowly, with only 4,026 trips requested in an average month during the period November 1977 through December 1978. In 1979, a number of agencies joined LISTS, and the average number of monthly trips grew to 13,490. In the next period, October 1979 through June 1980, the average number of trips served by LISTS monthly increased to 14,397. In the following periods, LISTS' monthly patronage has remained close to this level.

LISTS' average transportation cost (in current dollars) has fluctuated since 1977. The average transportation cost for a trip during the period November 1977 through December 1978 was \$2.82, the highest average cost since the introduction of the broker. With only 4,026 monthly trips requested on average, it is likely that the LISTS network was unable to achieve the level of ridesharing in its first fiscal period that it was able to obtain in later months. In the period January 1979 through September 1979, LISTS' average transportation cost decreased dramatically to \$1.35 per trip. The average transportation cost per trip increased during the next two periods and dropped again in the fiscal period July 1981 through June 1982.

TABLE 3-3. PERCENTAGE OF TOTAL DISBURSEMENTS BY
CARRIER FOR FISCAL PERIODS 1977-82

<u>Carrier</u>	<u>Nov. 77- Dec. 78</u>	<u>Jan. 79- Sept. 79</u>	<u>Oct. 79- June 80</u>	<u>July 80- June 81</u>	<u>July 81- June 82</u>
Bill's Taxi Service	15.1%	13.9%	13.4%	12.3%	8.8%
Cisney's Van Service	9.5	20.2	14.5	15.2	14.9
Columbia Taxi	7.7	4.5	.5	6.0	6.6
Community Action Program	10.3	---	---	---	---
Friendly Taxi	.01	19.6	15.8	6.7	32.0
Johnson's Bus Service	10.1	12.2	15.4	7.5	---
Lancaster Limousine	17.0	19.6	18.1	17.8	20.8
Lancaster Yellow Cab	28.2	6.8	14.7	25.1	.4
Red Rose Transit	2.1	1.6	4.4	5.5	2.4
Wheary's Wagon	---	---	---	.6	8.8
Administrative Account	---	1.5	3.1	3.4	5.0
Total Disbursements	\$159,020	\$163,946	\$257,068	\$393,665	\$361,051

SOURCE: Audit Reports for LISTS, Statement of Revenues and Expenditures, and calculations by Charles River Associates, 1983.

TABLE 3-4. LISTS CARRIER RIDERSHIP BY GROUP AND SECTOR (1980-81)

	Lancaster City	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5
Agency sponsored one-way trips (LISTS)						
Senior citizens (65 and older)	47,500	10,700	14,900	13,300	11,400	13,100
Senior citizens (60 to 64)	23,100	3,375	8,100	3,900	3,488	5,100
Other	7,700	1,125	2,700	1,300	1,162	1,700
Subtotal - LISTS trips	78,300	15,200	25,700	18,500	16,050	19,900
Other (non-LISTS) one-way trips*						
Senior citizens (65 and older)	36,900	5,518	8,680	2,997	744	1,325
All other	45,100	1,602	2,520	999	916	1,988
Subtotal - Other trips	82,000	7,120	11,200	3,996	1,660	3,313
Total one-way trips	160,300	22,320	36,900	22,496	17,710	23,213
LISTS trips as a percentage of total trips	48.8	68.1	69.6	82.2	90.6	85.7

*Estimated by private carriers from total number of unsponsored trips. Carrier for LISTS service sectors in 1980-81 was as follows: Lancaster City - Lancaster Yellow Cab and Baggage, Inc; Sectors 1 and 2 - Johnson's Bus Service; Sector 3 - Lancaster Limousine Service, Ltd.; Sector 4 - Bill's Taxi Service; Sector 5 - Cisney's Van Service.

SOURCE: Section 406 Program Application, information supplied by contracted carriers to the Lancaster County Planning Commission, June 1981.

TABLE 3-5. AVERAGE MONTHLY TRIPS AND COST PER TRIP FOR FISCAL PERIODS 1977-82

	<u>Nov. 77- Dec. 78</u>	<u>Jan. 79- Sept. 79</u>	<u>Oct. 79- June 80</u>	<u>July 80- June 81</u>	<u>July 81- June 82</u>
Average monthly trips*	4,026	13,490	14,397	14,459	14,218
Average transportation cost per trip**	\$2.82	\$1.35	\$1.98	\$2.27	\$2.12
Average administrative cost per trip***	\$0.76	\$0.23	\$0.26	\$0.34	\$0.39
Average total cost per tript (in current dollars)	\$3.58	\$1.58	\$2.24	\$2.61	\$2.51
Average total cost per tript†† (in 1977 dollars)	\$3.05	\$1.24	\$1.60	\$1.49	\$1.27

SOURCE: Audit Reports for LISTS, Statement of Revenues and Expenditures, ridership information from LISTS, and calculations by Charles River Associates, 1983.

*The total number of one-way trips divided by the number of months in the fiscal period provides the number of average monthly trips.

**The average monthly transportation cost (see Table 2-4) divided by the average monthly rides provides the average transportation cost per trip.

***The average monthly administrative costs (see Table 2-4) divided by the average monthly trips provides the average administrative cost per trip.

†The sum of the average monthly transportation and administrative costs divided by the number of average monthly rides, provides the total average cost per trip.

††The average total cost in each fiscal period was deflated to January 1977 dollars using the public transportation component of the Consumer Price Index for all urban consumers in the Philadelphia area.

Increased fuel prices probably caused the large increase in transportation cost per trip between 1979 and 1980. Fluctuations since that time cannot be easily explained, but may be a result of the constant change in the mix of users and their differing needs.

Like its transportation costs, LISTS' administrative expenses (in current dollars) reached their highest level, \$0.76 per trip, during the broker's first fiscal period. This was because of start-up expenses and the small number of trips over which LISTS' fixed costs were divided. Average administrative costs during the next two periods were \$0.23 per trip and \$0.26 per trip. During 1980, LISTS' administrative expenses began to rise, at least partly because of expenses associated with the lift vehicle. During fiscal periods 1980-81 and 1981-82, the administrative cost per trip was \$0.34 and \$0.39, respectively.

As also shown in Table 3-5, the average total cost of LISTS service (in current dollars) was \$3.58 in 1978, \$1.58 through September 1979, \$2.24 through June 1980, \$2.61 through June 1981, and \$2.51 through June 1982. When we deflate these figures to account for inflation, as listed in the last row of Table 3-5, we find that LISTS has done a good job of restraining the growth of transportation costs in real terms. The average total cost of LISTS service (in 1977 dollars) was \$3.05 in 1978, \$1.25 through September 1979, \$1.60 through June 1980, \$1.49 through June 1981, and \$1.27 through June 1982. Although the total number of trips served by LISTS changed over these periods, the types of trips served remained fairly stable. The percentage of total trips purchased by the Office of Aging declined slightly over the period, reducing the percentage of total trips that are local-center trips. Local-center trips are those on which LISTS' carriers can achieve the highest level of ridesharing and, hence, lowest per-passenger costs. Therefore, it is reasonable to assume that LISTS' low per-trip costs are not the result of changes in the mix of trips requested by agencies.

With the limited information available, we can make a reasonable comparison of the cost of transportation service to some agencies before and after LISTS. Table 3-2 provides the total cost of service, including administrative costs, provided by seven agencies in 1977. Four of these agencies use LISTS -- CAP Rural Outreach, CAP Head Start, United Cerebral Palsy, and Goodwill. For two months in 1981, LISTS computed the cost to each agency of LISTS service. Table 3-6 presents the average cost per one-way trip for each of the four agencies before using LISTS and using LISTS. The average cost per trip decreased dramatically for two agencies, CAP-Rural Outreach and Goodwill, in real terms. The average cost per trip for United Cerebral Palsy stayed about the same, in real terms, and the average cost of CAP-Head Start increased almost 100 percent. Two caveats must be noted concerning the interpretation of these data. First, while we are comparing trip requests from the same agencies before and after LISTS, we have no way to control for the exact characteristics of the trips requested by each agency. Second, LISTS does not charge agencies the full cost of its service

TABLE 3-6. COST COMPARISON OF TRANSPORTATION PROVIDED BY FOUR AGENCIES, USING THEIR OWN VEHICLES AND USING LISTS

	<u>CAP-Rural Outreach</u>	<u>CAP-Head Start</u>	<u>United Cerebral Palsy</u>	<u>Goodwill</u>
Estimated 1977 cost per one-way trip in own vehicle*	\$4.06	\$0.99	\$2.56	\$2.14
Actual 1981 cost per one-way trip using LISTS**	\$3.82	\$3.70	\$5.14	\$1.93
1981 cost per one-way trip using LISTS (in 1977 dollars)***	\$1.96	\$1.90	\$2.64	\$0.99

*Source of this information is the Lancaster County Planning Commission. 1977. Rural Public Transportation Study. See Table 3-1 for complete information.

**Source of this information is LISTS, July and August 1981. Agency Transportation Cost Breakdown.

***One-way trip cost for 1981 was deflated to January 1977 using the public transportation component of the Consumer Price Index for all urban consumers in the Philadelphia area.

because agencies pay only for telephone and printing services. Adding the full cost of administration to LISTS would increase the cost per trip in current dollars by approximately 20 cents.

3.4 BALANCING SERVICE STANDARDS AND TRANSPORTATION COSTS

We have seen that LISTS has been able to reduce or hold constant the transportation costs of many of the agencies using it. Competition among carriers forces them to use their vehicles in the most productive manner possible. To further improve productivity, LISTS restricts the services provided by carriers, offering certain services on a limited number of days.

To maintain this system, LISTS must balance the service requirements of the agencies against the carrier's desire for cost-cutting. The agencies want low transportation costs, but they also want high-quality service. Like all transportation purchasers, the agencies, in general, want carriers to attract sensitive, well-trained drivers. The agencies want the carriers to wait for clients who are late when being picked up but to arrive on time; in addition, they prefer to adjust their program schedules as little as possible.

The carriers, on the other hand, want to serve as many people as possible during each hour of operation. They want good drivers but cannot afford to pay salaries above that which a competitor might pay. They do not want their vehicles delayed by late passengers and they would like agencies to be understanding when a vehicle is late or early. They also would like agencies to cooperate with them in scheduling trips for maximum vehicle productivity.

The broker is the agent through which these desires are balanced. To meet agency demands, LISTS has service standards that meet the minimum requirements of agencies for service. LISTS has also set up complaint procedures, which provide for communications from an agency to a carrier. LISTS asks agencies to adjust their schedules for productivity reasons but an agency is under no obligation to do so. An agency that cannot adjust, however, usually must pay a higher cost of service than it would if it did adjust. Agencies that do not find these avenues for expression of their service requirements sufficient can appeal to the LISTS Director or Board of Directors or, if all else fails, may seek other transportation providers.

To aid carriers in their attempts to increase productivity, LISTS pre-schedules many of its own trips, with maximum ridesharing as a goal. Some carriers reschedule trips originally scheduled by LISTS staff but they do so with the advantage of someone having already grouped trips.

LISTS' balancing of service quality and cost is often not completely satisfying to either agencies or carriers. In fact, given that tension between quality and cost is necessary and encouraged by the competitive process, the demands of agencies and the carriers will probably never be fully met by LISTS. In the next section, we discuss the findings of a survey of county human service agencies, including the opinions of LISTS-affiliated managers about LISTS service. Agencies are generally pleased with LISTS, but have some ideas for improvements which often center on the cost-cutting behavior of carriers.

On the whole, the carriers are also pleased with LISTS. In the latest round of bidding, all carriers who provided service in fiscal year 1982-83 bid to serve LISTS again in 1983-84. Despite this commitment to the program, LISTS carriers would like to see certain changes in LISTS operations. The change most often mentioned by carriers is that they would like to be more involved in formulating LISTS policy and in answering complaints. Several carriers feel that they should have played a more important role in LISTS' decision to purchase wheelchair-accessible equipment, saying that different equipment should have been purchased. A number of carriers also feel that LISTS' complaint procedures do not allow for communication from the carrier back to the agency. When a complaint is issued, they say, they do not get an appropriate opportunity to respond.

These opinions reflect the issues that face the broker in matching supply and demand. It is unlikely that they will ever be fully resolved because such issues are endemic to a system based on competition among carriers for agency trip requests. The system appears to be working well, however, with LISTS serving a stable number of trips each month at a cost that is lower, in many cases, than it was before.

4. CHARACTERISTICS AND RESPONSE OF THE MARKET FOR LISTS SERVICES

4.1 INTRODUCTION

In this section, we discuss the characteristics of those groups eligible to use LISTS and we examine available information on the response of these groups to LISTS. First, we describe the elderly and handicapped populations in Lancaster County and review the SET and AdVANce programs in determining the extent to which subsidized transportation is available to these populations. Next, we present the findings of a survey of Lancaster County human service agencies, which provides information on the characteristics of LISTS-affiliated agencies and non-LISTS-affiliated agencies. In addition, we examine differences in the transportation programs of both types of agencies and we consider the determinants of LISTS usage.

4.2 THE ELDERLY AND HANDICAPPED POPULATIONS

According to the 1980 U.S. Census, there are 42,338 persons residing in Lancaster County who are 65 years of age or older. The Lancaster County Planning Commission (LCPC) estimates that 23 percent of the County's elderly population live in Lancaster City, 26.5 percent live in the boroughs (smaller urbanized areas located in the rural sectors, such as Mount Joy), and the remaining 50 percent live in the non-urbanized portions of the rural sectors.* Households headed by an elderly person have lower annual incomes, on average. In 1970, 42 percent of the families headed by a person 65 years old or over had an income below \$5,000 annually; by comparison only 10 percent of the families headed by a non-elderly persons had incomes below that level.**

Using the 1972 National Health Survey and the 1970 U.S. Census, the LCPC estimates that 13,500 Lancaster County residents can be termed transportation-handicapped. As shown in Table 4-1, the Commission estimates 3,500 of the transportation handicapped are institutionalized in nursing homes, hospitals, etc., leaving a total of 10,000 chronically and acutely handicapped persons residing in private residences.

The LCPC examined four national studies of the transportation-handicapped population and estimates that approximately one-half of this population is elderly. Table 4-2 lists the percentage of total

*Lancaster County Planning Commission, Elderly and Handicapped Transportation Study, 1978, p. 11.

**Ibid., p. 10. Comparable figures for 1980 are not yet available.

TABLE 4-1. ESTIMATED NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS IN LANCASTER COUNTY, BY SEVERITY OF HANDICAP*

Chronically handicapped	9,000
Acutely handicapped	1,000
Institutionalized handicapped	<u>3,500</u>
Total	13,500

*Note: Level of severity is as defined in the 1972 National Health Survey and the 1970 U.S. Census.

SOURCE: Lancaster County Planning Commission. November 1978. Elderly and Handicapped Transportation Study.

TABLE 4-2. PERCENT OF TOTAL NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS, BY AGE

Less than 18 years old	less than 5
18-64 years old	42-44
65 years old and over	49-54

SOURCE: Lancaster County Planning Commission. November 1978. Elderly and Handicapped Transportation Study.

transportation-handicapped persons by age category. Applying this estimate to local population figures, the LCPC estimates that 12 percent of the elderly are also transportation-handicapped. Thus, there is considerable overlap between the two groups.

Like the elderly, the transportation handicapped as a group have lower family incomes than does the general population. The LCPC notes that in 1975 an estimated 52 percent of the transportation handicapped, compared to 20 percent of the general population, resided in households with annual incomes below \$5,000. Similarly, in 1975 an estimated 19 percent of the transportation handicapped, compared to 45 percent of the general population, resided in households with incomes above \$10,000.*

Because the elderly and the transportation-handicapped are disproportionately represented among lower-income households, they are less likely than the general population to own an automobile. The LCPC estimates on the basis of national statistics that 45 percent of the elderly do not own an automobile, compared to 15 percent of the general population.** With regard to automobile availability, however, the LCPC found that the elderly and handicapped tend to use the automobile most often as passengers. According to a national study, 76 percent of the elderly and handicapped have an automobile available to them as either a driver or passenger.*** There is no local information on automobile availability in Lancaster County.

In planning for the transportation needs of the elderly and handicapped, it is necessary to understand their mobility restrictions. A transportation system accessible to someone who has difficulty walking may not be accessible to someone who uses a wheelchair. In its 1978 study of elderly and handicapped transportation needs, the LCPC estimated the number of transportation-handicapped persons by their ability to use transit. The Commission considered handicapped only those persons whose handicap was due to chronic conditions and who were not institutionalized. (The Commission reasoned that the institutionalized handicapped population has little need for public transportation services, both because their conditions greatly reduce their ability and desire to make trips and because transportation is provided by the institution as needed.)

As shown in Table 4-3, approximately 41 percent (3,705) of the 9,040 chronically transportation-handicapped persons in Lancaster County can use transit with some degree of difficulty. Of the 3,705 individuals who can use transit, 24 percent (899) require an aid such as a walker. Approximately 59 percent (5,335) of the transportation-handicapped cannot use conventional transit at all, and 63 percent of these individuals (3,358) are confined

*Lancaster County Planning Commission, op. cit., p. 9.

**Ibid., p. 10.

***Ibid., p. 11.

TABLE 4-3. ESTIMATED NUMBER OF TRANSPORTATION-HANDICAPPED PERSONS IN LANCASTER COUNTY AND URBANIZED AREAS, BY ABILITY TO USE TRANSIT, 1977

	<u>Lancaster County</u>	<u>Urbanized Area</u>	<u>Percent of Handicapped in Urbanized Area</u>
Can Use Transit With Difficulty			
With trouble	2,806	1,053	37.5
Use aids	<u>899</u>	<u>351</u>	<u>39.0</u>
Subtotal	3,705	1,404	37.9
Cannot Use Transit			
Use aids	599	235	39.2
Need escort	783	304	38.8
Use wheelchair	595	227	38.2
Confined to home	<u>3,358</u>	<u>1,311</u>	<u>39.0</u>
Subtotal	<u>5,335</u>	<u>2,077</u>	<u>38.9</u>
Total	9,040	3,481	38.5

Note: This table includes only those with chronic conditions.

SOURCE: Lancaster County Planning Commission. November 1978. Elderly and Handicapped Transportation Study.

to their homes. Thus, only 22 percent (1,977) of the total transportation-handicapped population is able to travel but unable to use conventional transit. Those who can use conventional transit may also be candidates for specialized transportation, particularly in poor weather. Another factor in planning specialized transportation is indicated by the residential location data in Table 4-3. Only 38.5 percent of the transportation-handicapped live in the Lancaster urbanized area, indicating that many individuals do not live near regular RRTA transit lines.

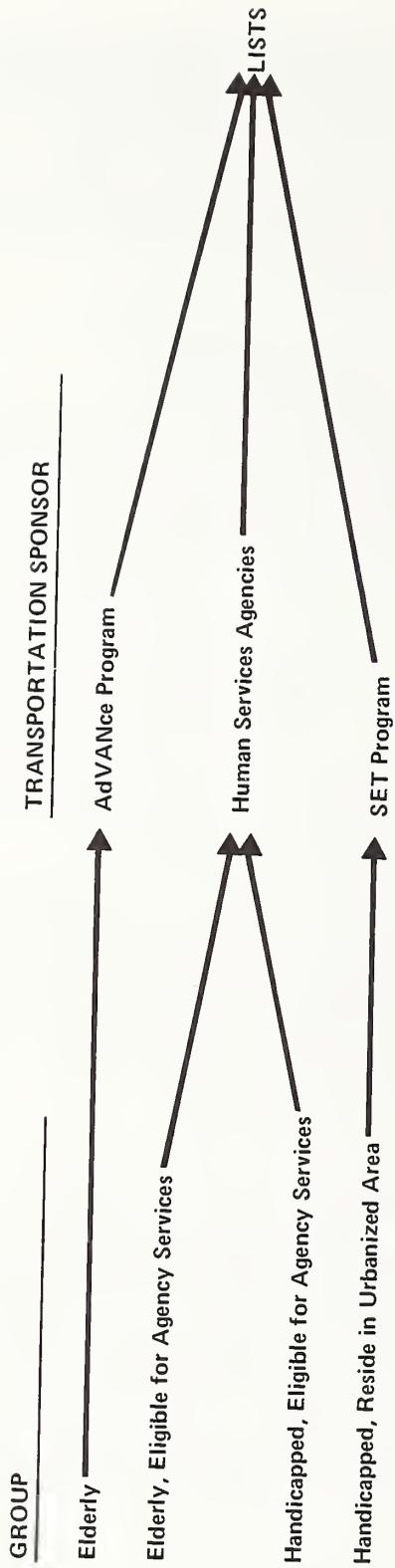
4.3 ROLE OF LISTS IN THE SET AND AdvANce PROGRAMS

The major function of LISTS is to provide transportation services sponsored by human service agencies. As described in Section 2, LISTS also provides transportation services for two programs not funded through the agencies, the RRTA's Special Efforts Transportation program (SET) and the state-funded AdvANce program. It is useful to review who is eligible for transportation service through each program. The RRTA's SET program provides a user-subsidy-type reimbursement for trips taken by persons unable to use fixed-route service and residing in the Lancaster urbanized area. The AdvANce program provides a similar reimbursement for trips taken by persons 65 years of age or older and residing anywhere in the county. Many people who are eligible and registered for the SET and AdvANce programs also receive transportation services through human service agencies. Figure 4-1 illustrates the relationship among LISTS transportation sponsors and various groups of the elderly and handicapped populations.

There is very little information available about those people who make use of the SET and the AdvANce programs. No data have been collected concerning the characteristics of those who use the programs or the purposes for which they use them. In the absence of such data, we will restrict our discussion by focusing on the contribution of LISTS to the service parameters of these programs. Specifically, we will look at LISTS' influence on service quality, availability, and the cost to users.

4.3.1 LISTS' Role in the SET Program

LISTS was chosen to be Lancaster County's SET provider because the RRTA and the LCPC thought that the program's transportation costs would be lower if special services could be provided through a coordinated network. It was believed that LISTS would provide a mechanism whereby SET trips would be coordinated with trips sponsored by other sources, allowing a higher degree of ridesharing for the system as a whole. The designation of LISTS as the SET provider would also allow the use of private carriers for the program without Section 13(c) labor protection complaints from the RRTA labor unions.



SOURCE: Charles River Associates.

Figure 4-1. LISTS TRANSPORTATION SPONSORS, BY GROUP SPONSORED

As discussed in Section 3, available information indicates that LISTS has been successful in restraining the cost of paratransit services in Lancaster County. Furthermore, the RRTA uses LISTS and it has not been subject to Section 13(c) complaints.

The SET program is limited to persons unable to use fixed-route transit and who reside in the Lancaster urbanized area. All trips sponsored by the program are serviced by LISTS' Lancaster City carrier, which is currently Friendly Taxi Company. Friendly Taxi provides service to SET users on a demand-responsive basis, when a trip request has been made 24 hours in advance. Friendly also provides service with a shorter advance reservation time as their capacity allows. Friendly serves the majority of its SET trips in a ramp-equipped van on a ridesharing basis. Because Friendly's bid to LISTS allows for a flat rate of reimbursement from LISTS for the trips it provides on a local-urban basis (including SET trips), the carrier has a strong incentive to organize shared rides. Thus, a person using the SET program is likely to receive shared-ride service.

LISTS has not influenced the hours of operation or the cost to users of the SET program. SET service hours are similar to the hours during which the RRTA operates the majority of its bus routes. These hours are Monday through Saturday, 5:30 a.m. to 5:30 p.m. The RRTA sets the fare for SET independent of LISTS' rate schedule, and therefore LISTS has no impact on the cost of SET trips to users. As a matter of RRTA policy, SET trips are limited to trips with origins and destinations inside the urbanized area. The use of LISTS as the SET carrier, however, further limits the SET service area to the LISTS-defined city sector. The use of LISTS has thus affected users of the SET program by limiting the size of the geographical area served.

While the SET program provides a convenient, inexpensive service option for handicapped persons within the urbanized area, it is clear that there are many handicapped persons outside the urbanized area without a similar alternative. As shown in Table 4-3, an estimated 1977 persons in Lancaster County are not confined to home but cannot use conventional transit (599 use aids, 783 need the help of another person, and 595 use a wheelchair). Of these 1977 persons, 766 live in the urbanized area, leaving 1,211 persons who are unable to use fixed-route transit and who reside outside the urbanized area. This latter group of transportation-handicapped persons is not eligible for the SET program. As shown in Table 4-2, approximately half of these people are 65 years of age or older and, hence, are eligible for the AdVANce program. The remaining handicapped persons in the non-urbanized portions of the county must rely on human service agencies for transportation they are unable to provide for themselves.

4.3.2 LISTS' Role in the AdvANce Program

LISTS has been designated as the provider for the state's Section 203/406 program in Lancaster County by the County Commissioners and with the approval of the Pennsylvania Department of Transportation. It was the legislative intent of the program that maximum use be made of existing demand-responsive systems within the state. The program represents a major expansion of transportation service to the elderly in the county. The highly subsidized service, known as AdvANce, is available to anyone 65 years of age or older living at least one-quarter of a mile from a bus route, and to any handicapped person. The program is not limited to specific trip purposes nor is it limited to specific origins and destinations.

The choice of LISTS as the AdvANce provider has affected the availability of service under the program. In this regard, LISTS' major influence has been in the rural sectors, where direct-line service (service between a rural sector and Lancaster City) and rural-local (service within a sector) are offered only on a limited number of days each week. In the absence of LISTS, these services might have been available seven days each week. Of course, the decision by LISTS to limit its service availability for particular types of trips has an important advantage to AdvANce users -- to the extent that it results in shared rides, it lowers the cost of their trips. A glance at the fare schedule for the program (Table 2-2) illustrates the benefit to AdvANce patrons of having the option of shared-ride service available to them. LISTS ensures that this option is available by constraining its service provision to limited days of the week. Without knowing the preferences of users, we cannot determine if users would be willing to pay more to have more widely available service. It is worth noting, however, that because the state pays three-quarters of the trip cost under the program, more people than just those taking direct-line and rural-local trips are affected by LISTS' policy. To the extent that each trip costs less to provide because of the policy, more trips can be provided with the county's funding allotment.

Despite outreach attempts by LISTS, AdvANce trips by individuals without agency sponsorship have grown slowly. In May 1983, one year after the start of the program, 7 percent of LISTS trips were taken by this group. As we discuss below, the agencies have made more active use of the program, and the overall impact of AdvANce has been to increase significantly the number of trips made through LISTS.

4.4 HUMAN SERVICE AGENCIES AND THEIR USE OF LISTS

As a group, Lancaster County human service agencies are the largest purchaser of LISTS service. Table 4-4 provides a list of the agencies that have used LISTS service through June 1982, and the percentage of total LISTS receipts from each agency. It can be seen that the Office of Aging has consistently been the largest user of LISTS service. In fiscal year 1977-78,

TABLE 4-4. PERCENTAGE DISTRIBUTION OF TOTAL TRANSPORTATION RECEIPTS
BY AGENCY, FISCAL PERIODS 1977-82

Agency	Nov. 77- Dec. 78	Jan. 79- Sept. 79	Oct. 79- June 80	July 80- June 81	July 81 June 82
Office of Aging	86.0%	70.2%	61.0%	66.9%	67.6%
Community Action Program	11.5	16.9	16.8	4.7	3.4
Head Start-CAP	---	3.6	5.2	8.2	3.4
Day Care-CAP	---	5.3	4.4	1.7	.4
Red Rose Transit Authority-SET	---	---	3.6	3.9	3.1
Easter Seals Society	.2	1.3	1.2	.3	.5
Welsh Mountain Medical Center	.1	1.6	1.0	.6	.4
Bureau of Vocational Rehabilitation	.5	.4	.3	---	---
Neighborhood Services	.08	.2	.3	.5	---
Boys Club of Lancaster	---	.4	.4	---	---
Tressler Lutheran Social Services	---	.04	.3	.6	---
American Cancer Society	---	.08	---	---	---
Lancaster Lebanon Consortium	1.4	---	---	.2	---
St. Joseph Hospital	---	---	.4	---	---
Goodwill Industries	---	---	1.0	.5	.2
County of Lancaster MH/MR	---	---	.7	2.0	1.7
Landis Homes Friendship Community	---	---	1.7	1.4	1.8
Merit Shop Training and Research	---	---	.7	1.8	1.4
Little People Day Care	---	---	.3	---	---
YWCA	---	---	.4	.1	---
Ephrata Area Rehabilitation Service	---	---	---	1.5	1.6
Department of Public Assistance	---	---	---	3.9	5.4
Lancaster Day Nursery	---	---	---	.4	.6
VO-TECH	---	---	---	.3	1.4
United Cerebral Palsy	---	---	---	.2	---
Donegal Mutual Insurance Co.	---	---	---	---	.4
Pennsylvania Dept. of Transportation	---	---	---	---	5.6
Other organizations (less than \$500)	---	---	.4	.7	.9
Other Reimbursements and Misc.	.05	.04	.02	---	---
Interest Income	.2	.02	.08	---	.2
Total Receipts	\$160,269	\$164,413	\$258,978	\$393,448	\$361,051

*Agencies which still used LISTS in 1981-1982 but which were lumped together in the Other Organizations (less than \$500) category.

SOURCE: Audit Reports for LISTS, Statement of Revenues and Expenditures, and calculations by Charles River Associates, 1982.

the Office of Aging accounted for 86 percent of LISTS' receipts. In fiscal year 1981-82, the Office of Aging portion of LISTS' receipts had fallen to 68 percent of total receipts. As the absolute number of LISTS trips has increased, numerous small accounts with other agencies have taken a larger share of LISTS service, including active accounts with the Community Action Program and the Department of Public Assistance. The Pennsylvania Department of Transportation accounted for only 5.4 percent of LISTS' receipts in 1981-82, but its portion has grown substantially in 1983.

As of May 1983, 40 agencies had accounts with LISTS for the purchase of transportation service. Thirty-two of the agencies are considered to be active users by LISTS. The number of agencies affiliated with LISTS has grown over time, as evidenced by Table 4-4. The introduction of the AdvANce program is partly responsible for the growth in agency contracts in 1982-83. Use of LISTS by many agencies fluctuates, in part because of variations in agency funding levels.

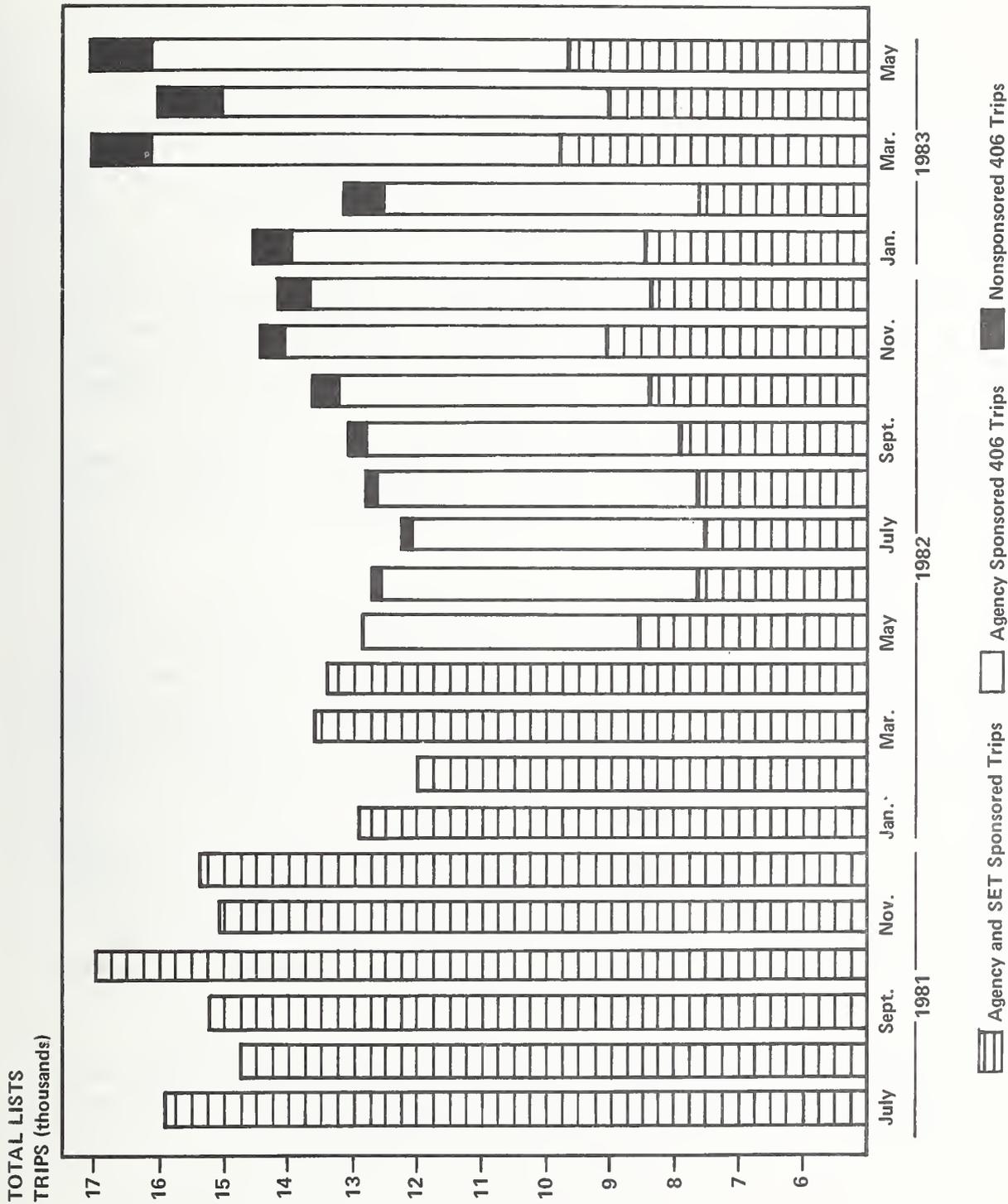
Since Lancaster's AdvANce program began, agencies have sponsored a large number of AdvANce trips. The overwhelming majority of these trips have been sponsored by the Office of Aging. As discussed earlier, when an agency sponsors an AdvANce trip, it pays the one-quarter (reduced) fare that otherwise would be charged to its clients, and the Commonwealth pays the remaining trip cost. As illustrated by Figure 4-2, the number of agency-sponsored LISTS trips dropped sharply at the inception of the AdvANce program. The drop in agency-sponsored trips was almost fully offset by agency-sponsored AdvANce trips. This transferral is fully in keeping with the program guidelines, as the program is currently administered.

4.4.1 The LISTS Human Service Agency Survey

In December 1982, LISTS implemented a survey of Lancaster County human service agencies for the purposes of this case study and to learn more about the agencies for its own planning. Sixty-three agencies were surveyed, including 28 agencies that purchase service through LISTS (hereafter termed LISTS-affiliated agencies) and 35 agencies that do not purchase service through LISTS (termed non-affiliated agencies). Response to the survey is summarized in the following table.

RESPONSE RATES TO LISTS HUMAN SERVICE AGENCY SURVEY

	<u>LISTS-Affiliated Agencies</u>	<u>Non-Affiliated Agencies</u>
Number of surveys distributed	28	35
Number of surveys returned	21	14
Percent returned	75%	40%



SOURCE: LISTS Ridership data, July 1981–May 1983; calculations by Charles River Associates.

Figure 4-2. TOTAL LISTS TRIPS, BY TYPE, JULY 1981–MAY 1983

Not surprisingly, agencies using LISTS services responded more readily to the survey than did non-affiliated agencies. The number of surveys returned was large enough to allow testing of a number of hypotheses about differences between the two groups of agencies. The response rate of non-affiliated agencies raises the question of possible biases in the analysis of this group of surveys. After an examination of the types of agencies that did not respond, we concluded that any bias that is present results in the overstatement of the size and scope of the transportation programs of the non-affiliated agencies. This is because those agencies that chose not to respond are those that usually do not provide many transportation services, such as nursing homes and health clinics. This type of bias did not alter the basic conclusions of the survey analysis.

Surveys were distributed to agencies in December 1982. Agencies were requested to return the survey within three weeks and were provided with a self-addressed, stamped envelope for this purpose. The survey contained three sections of questions: the first section asked about the agency and its clients; the second inquired about the agency's transportation program and its use of various services; and the third section solicited the agency manager's opinions about transportation coordination (in the case of a non-affiliated agency) or toward LISTS (in the case of an affiliated agency). The survey instrument used for LISTS-affiliated agencies is shown in Appendix A and the instrument for non-affiliated agencies is shown in Appendix B.

4.4.2 Characteristics of LISTS-Affiliated and Non-Affiliated Agencies

Coordination of the transportation programs of human service agencies is mandated by several Federal legislative acts and is often encouraged by state and local legislation as well. Coordination is promoted as a key method of reducing the cost of agency-sponsored transportation. Less service duplication, increased ridesharing, and greater service availability are potential benefits of agency transportation program coordination.

Despite the possible cost savings from coordination, many human service agencies choose not to participate in coordinated service networks. Some agency managers fear dramatic degradations in service quality and in the agency's ability to control its transportation expenditures. Others view coordination as a loss of agency visibility, particularly when a coordinated system will be substituted for agency vehicles.

In this and following sections, we present information from the Lancaster County human service agencies survey in an attempt to clarify why some agencies in the county choose to use a coordinated provider, LISTS, and why some agencies do not. We begin with an examination of the characteristics of LISTS-affiliated and non-affiliated agencies.

Table 4-5 presents information on the organizational structure of Lancaster County agencies. The majority of LISTS-affiliated agencies and non-affiliated agencies are private, not-for-profit organizations. LISTS agencies, however, are more likely to be private, for-profit agencies or public agencies than are non-affiliated agencies.

This difference in organizational structure is reflected in the reliance of each group of agencies on various funding sources. As shown in Table 4-6, LISTS agencies receive an average of 50.6 percent of their funding from government grants and funding programs. They receive 15.2 percent from sales of products and services and 14.7 percent from contributions. Of their funding, 8.1 percent is obtained through service contracts and third-party payments. In comparison, non-affiliated agencies also receive the largest portion (46.3 percent) of their funding from government grants and programs. Unlike LISTS agencies, however, non-affiliated agencies receive over a quarter of their funding through contributions. In addition, these agencies are less dependent upon contracts and third-party payments than are LISTS agencies.

Table 4-7 presents some descriptive information on the agencies and their clients. Of the LISTS agencies, 61.9 percent serve the elderly as their clients, compared with 50 percent of non-affiliated agencies. Similar percentages of both groups of agencies serve the physically handicapped, but non-affiliated agencies are more likely than LISTS agencies to serve the mentally handicapped. On average, LISTS agencies are larger in terms of the number of clients served, having an average of 1,934 clients. Non-affiliated agencies have an average of 1,395 clients. Both groups serve slightly over one-half of their clients at least once a month.

Interestingly, LISTS agencies spend more on average for transportation services than do non-affiliated agencies. In 1982, LISTS agencies spent \$14,439 providing transportation to their clients and in support of agency programs. Non-affiliated agencies, in comparison, spent an average of \$9,897 on transportation. For LISTS agencies, transportation expenditures comprised an average of only 2.6 percent of the total agency budget, while non-affiliated agencies spent an average of 3.3 percent of their budget providing transportation. Agencies using LISTS thus tend to have larger overall budgets than non-affiliated agencies.

With regard to the types of services provided to their clients, the biggest differences between the two groups of agencies are in the provision of transportation as an individual service and the provision of group meals (see Table 4-8). Of LISTS agencies, 57.1 percent offer transportation services to their clients, compared with 35.7 percent of non-affiliated agencies. Group meals are provided by 23.8 percent of LISTS agencies, compared with 7.1 percent of non-affiliated agencies. LISTS agencies are also more likely to provide physical rehabilitation and vocational training. Non-affiliated agencies, on the other hand, are more likely to offer counseling and other services to their clients. The high percentage of

TABLE 4-5. ORGANIZATIONAL STRUCTURE OF AGENCIES, BY LISTS AFFILIATION
(Percent)

<u>Organizational Structure</u>	<u>LISTS-Affiliated Agencies</u>	<u>Non-Affiliated Agencies</u>
Private, for profit	14.3%	7.1%
Private, not for profit	61.9	71.5
Public	23.8	14.3
Other	<u>0</u>	<u>7.1</u>
All agencies	100.0	100.0

SOURCE: Lancaster County Human Service Agency Surveys, December 1982;
calculations by Charles River Associates, 1983.

TABLE 4-6. AVERAGE RELIANCE ON FUNDING SOURCES, BY LISTS AFFILIATION

<u>Funding Source</u>	<u>Average Percent of Total Agency Funding from Source</u>	
	<u>LISTS-Affiliated Agencies</u>	<u>Non-Affiliated Agencies</u>
Contract	8.1%	4.6%
Government	50.6	46.3
Contributions	14.7	25.9
Sales	15.2	12.5
Other	10.8	<u>4.1</u>
		93.4

Note: Columns do not sum to 100 percent because numbers are averaged.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982;
calculations by Charles River Associates, 1983.

TABLE 4-7. DESCRIPTIVE STATISTICS OF AGENCIES AND AGENCY CLIENTS, BY LISTS AFFILIATION

	<u>LISTS- Affiliated Agencies</u>	<u>Non- Affiliated Agencies</u>
Percent of agencies serving the elderly	61.9%	50.0%
Percent of agencies serving the physically handicapped	66.7	64.3
Percent of agencies serving the mentally handicapped	57.1	78.6
Average number of clients/agency	1,934	1,395
Average proportion of clients using agency services at least once a month	56.2	54.9
Average proportion of clients requiring use of a wheelchair	9.4	8.4
Average 1982 transportation expenditures	\$14,439	\$9,897
Average transportation expenditures as a percentage of total agency budget	2.6%	3.3%

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

TABLE 4-8. LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES PROVIDING VARIOUS CLIENT SERVICES

<u>Client Service</u>	<u>Percent of LISTS-Affiliated Agencies</u>	<u>Percent of Non-Affiliated Agencies</u>
Counseling	66.7	78.6
Group Meals	23.8	7.1
Recreation/social activities	33.3	28.6
Education	52.4	50.0
Transportation	57.1	35.7
Physical rehabilitation	23.8	14.3
Vocational training	38.1	28.6
Other services	52.4	85.7

Note: Columns do not sum to 100 percent because many agencies offer more than one client service.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

non-affiliated agencies that indicated they provide other services reflects the large number of organizations in this category that are not typically thought of as targets for transportation coordination. These organizations include a day-care center, a health clinic, and several nursing homes.

Tables 4-9 and 4-10 list responding agencies by their primary purpose. It should be noted that most agencies, particularly those in the Community Service/Counseling/Information category perform a variety of functions. Agencies not affiliated with LISTS are more likely to be concentrated in this category. Agencies such as American Heart Association, Lancaster Information Center, and National Council on Alcoholism exist primarily to provide information rather than services requiring direct personal contact. Agencies in the senior citizen and educational categories are more likely to be affiliated with LISTS since they require transportation to specific activities.

4.4.3 Transportation Programs of LISTS-Affiliated and Non-Affiliated Agencies

By examining the transportation programs of LISTS-affiliated and non-affiliated agencies, we can obtain a picture of how LISTS service is used and how client transportation is provided by agencies not using LISTS. Table 4-11 presents information on the transportation arrangements of agencies that responded to the survey. Non-affiliated agencies were more likely to operate their own vehicles and were also more likely to utilize volunteers or staff who drove their own vehicles. Surprisingly, one-third of the LISTS-affiliated agencies reported purchasing additional transportation services directly from private carriers. Among the LISTS-affiliated agencies, 90.5 percent reported that they are using LISTS for transportation, while the other 9.5 percent have inactive accounts. Three of the non-affiliated agencies reported that they had used LISTS for transportation in the past.

Table 4-12 lists the purposes for which the agencies responding to the survey provide transportation. Approximately one-half of both groups provide transportation to and from the agency. Ten percent of LISTS agencies provide transportation to group-meal sites (including group-meals held at the agency), while no non-affiliated agency provides transportation for this purpose. LISTS agencies are also more likely to provide transportation for medical purposes and for educational classes. Non-affiliated agencies, in contrast, are more likely to provide transportation for group social outings and events, employment, and shopping.

We examined the characteristics of vehicles owned by the agencies responding to the survey (see Table 4-13). In this group, 62 percent of the LISTS agencies and 65 percent of the non-affiliated agencies indicated they do not own or operate agency vehicles. Among the affiliated agencies responding, a total of 28 vehicles are owned or operated by the agencies.

TABLE 4-9. NON-AFFILIATED AGENCIES BY PRIMARY PURPOSE

HEALTH CARE

VISITING NURSE HOME CARE ASSOCIATION
LANCASTER GENERAL HOSPITAL
STATE HEALTH CENTER

TRAINING, REHABILITATION, AND JOB DEVELOPMENT

LANCASTER COUNTY ASSOCIATION FOR THE BLIND
UNITED CEREBRAL PALSY OF LANCASTER COUNTY
LANCASTER COUNTY EMPLOYMENT AND TRAINING
THE GATE HOUSE (H.E.A.R., INC.)
LANCASTER COUNTY CHAPTER-NATIONAL MS SOCIETY
LIGHT HOUSE REHABILITATION CENTER
RED ROSE SERVICES

SENIOR CITIZEN

EDUCATION

THE S. JUNE SMITH CENTER

COMMUNITY SERVICE/COUNSELING/INFORMATION

CATHOLIC SOCIAL SERVICES
CHRISTIAN SOCIAL MINISTRY
LANCASTER INFORMATION CENTER
COMMUNITY SERVICES, INC.
PLANNED PARENTHOOD OF LANCASTER
AMERICAN HEART ASSOCIATION
NATIONAL COUNCIL ON ALCOHOLISM

SOURCE: LANCASTER COUNTY HUMAN SERVICE AGENCY SURVEYS, December 1982;
classified by Charles River Associates, 1983.

TABLE 4-10. LISTS-AFFILIATED AGENCIES BY PRIMARY PURPOSE

HEALTH CARE

AMERICAN CANCER SOCIETY
ST. JOSEPH HOSPITAL & HEALTH CARE CENTER
WELSH MOUNTAIN MEDICAL CENTER
CONESTOGA VIEW

TRAINING REHABILITATION AND JOB DEVELOPMENT

MERIT SHOP TRAINING & RESEARCH CENTER, INC.
REHABILITATION COORDINATION, INC.
GOODWILL INDUSTRIES OF LANCASTER CO.
OCCUPATIONAL DEVELOPMENT CENTER
EASTER SEAL REHABILITATION CENTER
LANCASTER GUIDANCE CENTER
OFFICE OF VOCATIONAL REHABILITATION

SENIOR CITIZEN

RETIRED SENIOR VOLUNTEER PROGRAM
LANCASTER COUNTY OFFICE OF AGING
LEADER NURSING & REHABILITATION CENTER
LANCASHIRE TERRACE

EDUCATION

LANCASTER DAY CARE CENTER
COMMUNITY ACTION PROGRAM/CHILD DEVELOPMENT CENTER
LANCASTER COUNTY VO-TECH SCHOOL

COMMUNITY SERVICE/COUNSELING/INFORMATION

LANCASTER SHELTER FOR ABUSED WOMEN
LANCASTER YWCA
COMMUNITY ACTION PROGRAM/RURAL OUTREACH

SOURCE: LANCASTER COUNTY HUMAN SERVICE AGENCY SURVEYS, December 1982;
classified by Charles River Associates, 1983.

TABLE 4-11. TRANSPORTATION ARRANGEMENTS OF LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES

<u>Transportation Arrangement</u>	<u>Percent of LISTS-Affiliated Agencies</u>	<u>Percent of Non-Affiliated Agencies</u>
Operate agency vehicles	28.6%	35.7%
Purchase transportation services directly from private carriers	33.3	21.4
Use volunteers or staff who drive their own vehicles	45.0	57.1
Reimburse clients for transportation expenses	25.0	7.1
Purchase service through LISTS	90.5	0

Note: Columns do not sum to 100 percent because not all agencies provide transportation and some agencies use more than one arrangement.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

TABLE 4-12. PURPOSES FOR WHICH LISTS-AFFILIATED AND NON-AFFILIATED AGENCIES PROVIDE TRANSPORTATION

<u>Travel Purpose</u>	<u>Percent of LISTS-Affiliated Agencies</u>	<u>Percent of Non-Affiliated Agencies</u>
Travel to and from agency	55.0	50.0
Travel to group-meal sites	10.0	0
Travel to medical or physical rehabilitation appointments	70.0	50.0
Travel to group social outings and events	35.0	41.7
Travel to employment	20.0	33.3
Travel for shopping	30.0	33.3
Travel to educational classes	30.0	25.0
Other purposes	25.0	25.0

Note: Columns do not sum to 100 percent because not all agencies provide transportation and some agencies provide transportation for more than one purpose.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

TABLE 4-13. CHARACTERISTICS OF VEHICLES OWNED BY AGENCIES SURVEYED,
BY LISTS AFFILIATION

	<u>LISTS-Affiliated Agencies</u>	<u>Non-Affiliated Agencies</u>
Number of agencies responding*	20	13
Total number of vehicles owned or operated by responding agencies	28	13
Total number of sedans owned or operated	10	3
Total number of vans owned or operated	5	10
Total number of buses owned or operated	13	0
Total number of lift- or ramp-equipped vehicles owned or operated	0	1
Average number of total vehicles owned or operated	1.4	1.0

*The survey was distributed to a total of 28 LISTS-affiliated agencies and 35 non-affiliated agencies.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982;
calculations by Charles River Associates, 1983.

Ten of these vehicles are sedans, 5 are vans, and 13 are buses. This is slightly misleading, however, since all 13 buses are owned by one agency, the CAP Child Development Program. With this agency removed, the average number of vehicles owned for LISTS-affiliated agencies is 0.8 rather than 1.4. No lift or ramp-equipped vehicles are operated by LISTS agencies. The number of vehicles owned or operated ranges from 0 to 15. Among the non-affiliated agencies responding, a total of 13 vehicles are owned or operated. Three of these vehicles are sedans, 10 are vans, and none are buses. One of the vehicles is ramp-equipped. The range of vehicles owned or operated by this group is from 0 to 6.

It is interesting to note that despite service available to them through LISTS, some affiliated agencies continue to operate their own vehicles, or contract directly for service. Several reasons for this are indicated from the written responses to the surveys. Some agencies use vehicles for purposes other than client transportation, including purchase of supplies and staff transportation. Other reasons included the need to use emergency vehicles (ambulances), the need to travel to sites outside the county such as Hershey Medical Center, and the high cost and low frequency of LISTS-sponsored service to remote rural areas.

Although the tables indicate that non-affiliated agencies require nearly as much transportation service as LISTS-affiliated agencies, written survey responses indicate that this is not the case. Many of the non-affiliated agencies which provide transportation service do so on an irregular basis. Several agencies use donated or employee-owned vehicles and thus would not benefit financially from using LISTS.

4.4.4 Explaining Differences in Fleet Composition and Use

Table 4-14 further supports the hypothesis that differences in agency fleets and their use of LISTS reflect differences in the average size of the transportation programs of the two groups. LISTS-affiliated agencies serve almost 10 times as many weekly trips as non-affiliated agencies, just with their own vehicles. When LISTS-affiliated trips and privately-contracted trips are added, LISTS-affiliated agencies provide over 20 times as many trips per week as non-affiliated agencies. Although non-affiliated agencies are more likely to use their vehicles for group trips, it appears that many of these trips are for special purposes, and are not taken on a regular basis.

These figures help to explain further the differences we observed earlier in the fleets of the two groups of agencies. On average, the number of trips served by non-affiliated agencies is low enough to be handled by agencies using their own transportation resources, including their own vehicles and volunteers. These trips are on average predominantly group trips and can probably be served efficiently in vans. LISTS-affiliated agencies, on the other hand, serve a much larger number of trips each week,

TABLE 4-14. CHARACTERISTICS OF AGENCY TRIP REQUESTS
FROM VARIOUS PROVIDERS, BY LISTS AFFILIATION

	<u>LISTS-Affiliated Agencies</u>	<u>Non-affiliated Agencies</u>
<u>Average number of weekly one-way trip requests</u>		
Served by LISTS	144.0	N.A.*
Served by private carriers outside of LISTS	2.3	1.4
Served in agency vehicles	128.8	13.4
<u>Average percentage of trips that are group trips</u>		
Served by LISTS	29.5	N.A.
Served by private carriers outside of LISTS	39.2	5.0
Served in agency vehicles	37.3	75.7

*Not applicable.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982;
calculations by Charles River Associates, 1983.

the majority of which are not group trips. The agencies would find it difficult to provide this many trips by themselves. Instead, the agencies rely on LISTS to provide on average over half of the trips they sponsor. Even though the proportion of group trips they sponsor is low, these agencies may hope to achieve savings through ridesharing by participating in a coordinated network.

An examination of the purposes for which LISTS-affiliated agencies use agency vehicles and the broker provides further information about how agencies use LISTS. As shown in Table 4-15, affiliated agencies use LISTS to provide transportation for every purpose listed. The affiliated agencies use LISTS exclusively for the provision of group-meal trips. Use of their own vehicles is also limited for transporting clients to and from the agency and to medical appointments. In contrast, 75 percent of the agencies use their vehicles to provide transportation to employment, and 50 percent use agency vehicles for shopping and for travel to educational classes.

4.4.5 Agency Experience with LISTS

In the human service agency surveys, managers of agencies that use LISTS were asked to answer questions about their experiences with LISTS and their opinion of LISTS service. In general, the managers indicated that their experiences with LISTS have been favorable and that they are satisfied with the services provided to them. There are some areas, however, where a few managers would like to see improvements in LISTS.

We asked the agencies what transportation providers or services they used prior to using LISTS. Seven of the 20 affiliated agencies responding said they had used agency vehicles to serve the trips for which they are now using LISTS. Fifteen agencies stated that they had used other providers: 6 had used the Community Action Program; 1 had used the RRTA; and 8 had used private carriers. Seven agencies stated that before LISTS they did not provide the trips they now provide through LISTS.

Currently, Friendly Taxi is the carrier used most often by LISTS-affiliated agencies. Sixteen of the 20 agencies responding indicated that they use Friendly Taxi for some or all of the trips they sponsor through LISTS. Eight agencies use Lancaster Limousine, eight use the RRTA, four use Columbia Taxi, and four use Cisney's Van.

One-quarter of the agencies indicated that LISTS is not able to meet all their needs for purchased transportation service. Some agencies stated a need for service on weekends, in the evening, or at times when LISTS service is not available. Two agencies would like to see LISTS provide daily local-rural service; one would like LISTS to serve all trips at all times; and one would prefer longer service hours. The agencies were not asked about their willingness to pay for these service improvements.

TABLE 4-15. PURPOSES FOR WHICH LISTS-AFFILIATED AGENCIES
USE AGENCY VEHICLES AND LISTS

<u>Travel Purpose</u>	<u>Percent of Those Providing Transportation for This Purpose</u>	
	<u>Using Agency Vehicle</u>	<u>Using LISTS</u>
Travel to and from the agency	27.3%	81.8%
Travel to group-meal sites (including meals served at the agency)	0	50.0
Travel to medical appointments, physical rehabilitation, etc.	35.7	71.4
Travel to group social outings and events	42.9	71.4
Travel to employment	75.0	100.0
Travel for shopping purposes	50.0	66.7
Travel to educational classes	50.0	66.7
Other purposes	20.0	40.0

Note: Columns will not sum to 100 percent because some agencies provide transportation for more than one purpose. Rows will not sum to 100 percent because agencies may use agency vehicles, contracts with private carriers, LISTS, or some combination of providers to serve any given trip purpose.

SOURCE: Lancaster County Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

Other suggestions for improvements focused on LISTS' administrative procedures. One agency felt that it would be useful to have more flexibility in trip scheduling by using available resources as demand warranted rather than molding demand to fit the LISTS schedule. In particular, this agency found that the carriers' schedules were allowed to interrupt the flow of medical patients to and from their appointments. Two agencies complained about the reliability of taxi service, stating that the cabs are often late in picking up their clients. Another agency stated that the ticket system is confusing, in particular that there are too many colors.

There were no suggestions made for improvements in LISTS' billing procedures. Seventy-one percent of the agencies reported that they have had no difficulties with LISTS' billings; 24 percent have had minor difficulties that have been resolved satisfactorily; and 5 percent have had major difficulties that have been resolved. No agency reported unresolved difficulties.

The agency managers were asked to compare LISTS service to the service the agency was using prior to LISTS. Table 4-16 presents the responses of the managers. Overall, these responses indicate that on many characteristics the managers think that LISTS service is equal to or an improvement over their previous service. All the managers rated LISTS service as good or better than their previous service with regard to vehicle safety and the provision of door-to-door service. LISTS also received high marks for its complaint procedures (90 percent said it was the same or better), accessible-vehicle availability (90 percent), and the ease of scheduling trips (80 percent). LISTS scored high with the managers on driver sensitivity (72.7 said the same or better) and on the availability of service when needed (70 percent), but on these two features some agency managers felt that LISTS service was much worse than the previous service they had been using. In general, LISTS service is perceived by the managers to be the same as their previous service in terms of the time spent waiting for a vehicle to arrive and the time spent in the vehicle. Only in terms of service hours did some managers rate LISTS worse than their previous service; no one rated it much better than their previous service. Even on this characteristic, however, 77.8 percent of the managers still feel that LISTS is equal to or somewhat better than the previous service.

Agency managers were also asked their opinions about the benefits of LISTS (see Table 4-17). Statements #1 and #2 relate to LISTS' impact on the costs of service provision. Sixty-five percent of the managers agreed with the statement that costs have decreased or risen more slowly as a result of LISTS. Eighty percent agreed with the statement that LISTS can negotiate with carriers more successfully than can an individual agency.

TABLE 4-16. COMPARISON BY LISTS-AFFILIATED AGENCY MANAGERS OF VARIOUS LISTS SERVICE CHARACTERISTICS WITH PREVIOUS SERVICE* (Percent)

	<u>Comparison with Previous Service</u> (N=11)					<u>All Agencies</u>
	<u>Much Better</u>	<u>Somewhat Better</u>	<u>Same</u>	<u>Somewhat Worse</u>	<u>Much Worse</u>	
Driver sensitivity (N=11)	9.1	45.4	18.2	18.2	9.1	100
Complaint procedures (N=10)	10.0	40.0	40.0	10.0	0	100
Time spent waiting for vehicle to arrive (N=10)	0	20.0	60.0	10.0	10.0	100
Time spent in vehicle (N=9)	0	22.2	66.7	11.1	0	100
Vehicle safety (N=10)	0	40.0	60.0	0	0	100
Availability of service when needed (N=10)	20.0	30.0	20.0	20.0	10.0	100
Service hours (N=9)	0	22.2	55.6	11.1	11.1	100
Provision of door-to-door service (N=9)	22.2	22.2	55.6	0	0	100
Accessibility of vehicles (N=10)	30.0	30.0	30.0	10.0	0	100
Ease of scheduling trips (N=10)	20.0	40.0	20.0	20.0	0	100

*In response to the following request to LISTS-affiliated agency managers: "Below are listed a number of LISTS service characteristics. Please indicate how these service characteristics differ from the service you received before your agency became affiliated with LISTS." Numbers listed are the percentage of respondents who checked each response.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculation by Charles River Associates, 1983.

TABLE 4-17. OPINIONS OF LISTS-AFFILIATED AGENCY MANAGERS
ABOUT THE BENEFITS OF LISTS SERVICE* (Percent)

<u>Statement</u>	<u>Agree</u>	<u>Dis- agree</u>	<u>No Opinion</u>	<u>All Agencies</u>
1. Agency transportation costs have decreased or risen more slowly than they would have without LISTS. (N=20)	65.0	20.0	15.0	100
2. LISTS can negotiate with carriers more successfully than an individual agency can. (N=20)	80.0	0	20.0	100
3. The agency receives a similar or higher quality service from LISTS than it did before. (N=18)	50.0	22.2	27.8	100
4. The agency is more flexible in the amount of service it can provide for clients. (N=18)	63.2	21.0	15.8	100
5. The agency is more flexible regarding when it can provide service for its clients. (N=18)	55.6	22.2	22.2	100
6. Scheduling trips is easier than before. (N=18)	77.8	5.5	16.7	100
7. It is easier to register complaints about service than before. (N=18)	61.1	16.7	22.2	100
8. Complaints are resolved in a more satisfactory manner than before. (N=18)	55.6	11.1	33.3	100
9. The agency has been able to use its vehicles more efficiently by using LISTS to provide single passenger trips.** (N=10)	80.0	0	20.0	100
10. LISTS is an important supplement to our other vehicles when a vehicle breaks down or a driver is unavailable.** (N=7)	57.1	0	42.9	100

*In response to the following request to LIST-affiliated agency managers:
"Please indicate whether you agree or disagree that the agency has received any of the following benefits from contracting with LISTS." Numbers listed are the percentage of respondents who checked each response.

**If an agency had no vehicles of its own, this question was skipped.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982;

Statements #3, #4, and #5 deal with service quality factors. Fifty percent of the agencies indicated that they receive a similar or higher quality service from LISTS than they did from their previous service; 22.2 percent disagreed with this statement; and 27.8 percent had no opinion. Of the managers, 63.2 percent agreed that LISTS has allowed the agency to be more flexible in the amount of service it can provide for clients, and 55.6 percent agreed that the agency is more flexible regarding when it can provide service for its clients.

The managers generally perceive benefits from LISTS' administrative procedures (statements #6, #7, and #8), 77.8 percent indicating that they find scheduling trips easier than before; 61.1 percent finding it easier to register complaints; and 55.6 percent finding that complaints are resolved in a more satisfactory manner.

The managers also indicated that the benefits of using LISTS extend to the agency fleets. Among those whose agency owns or operates vehicles, 80 percent agreed that LISTS has allowed the agency to use its vehicles more efficiently (statement #9) and 57.1 percent indicated that LISTS is an important supplement to their own vehicles when one is out of service (statement #10).

4.4.6 Opinions of Non-Affiliated Agency Managers Toward Coordination

In the survey of non-affiliated agencies, the managers were asked whether they had ever considered using LISTS and about their opinions concerning agency transportation coordination. Three managers indicated that their agencies had considered using LISTS but had decided that they could meet their transportation needs more satisfactorily using private carriers or their own vehicles. Two of the agencies believe that LISTS is too expensive. The third serves nonambulatory clients and believes that LISTS cannot serve their needs because of a lack of seatbelts and chaperones and inconsistency in staff. Most agencies, however, had never considered LISTS. As evidenced by Table 4-14, the non-affiliated agencies do not on average provide much transportation to their clients. Sixty percent of the non-affiliated agencies indicated that they are unable to fulfill all their clients' requests for service because of a lack of agency funds for this purpose.

The agency managers were asked to indicate whether they agreed or disagreed with a variety of statements about the effect of coordination on service quality, transportation costs, vehicle usage, and agency administration. Statements number 1 through 4 on Table 4-18 relate to service quality. Responses in this area were generally positive, with a majority of managers agreeing that LISTS would provide greater flexibility in terms of both the amount and time availability of service. A minority of managers felt that the quality of service received by the agency would decline in a coordinated situation.

TABLE 4-18. OPINIONS OF NON-AFFILIATED AGENCY MANAGERS REGARDING COORDINATION OF THEIR AGENCY TRANSPORTATION PROGRAMS* (Percent)

<u>Statement</u>	<u>Strongly Agree</u>	<u>Some-what Agree</u>	<u>No Opinion</u>	<u>Some-what Dis-agree</u>	<u>Strongly Dis-agree</u>	<u>All Agencies</u>
1. The agency would receive a lower quality of transportation service than it currently receives. (N=7)	14.3	14.3	28.6	42.8	0	100
2. The agency would be more flexible in the amount of service it could provide to its clients. (N=7)	28.6	28.6	0	14.2	28.6	100
3. The agency would be more flexible in when it could provide service for its clients. (N=7)	28.6	28.6	0	28.6	14.2	100
4. Drivers in a coordinated program would be as sensitive as our current drivers are. (N=7)	0	14.3	57.1	28.6	0	100
5. Agency transportation costs would decrease. (N=7)	14.3	28.6	0	57.1	0	100
6. The agency would be able to increase ridesharing (the number of passengers in a vehicle). (N=7)	28.6	14.3	0	42.8	14.3	100
7. The agency would have less control over its transportation program. (N=6)	16.7	33.3	16.7	33.3	0	100
8. The agency would have difficulty planning a budget for its transportation program. (N=6)	16.7	16.7	16.7	50.0	0	100

(Table continued on following page.)

TABLE 4-18 (Continued). OPINIONS OF NON-AFFILIATED AGENCY MANAGERS REGARDING COORDINATION OF THEIR AGENCY TRANSPORTATION PROGRAMS* (Percent)

<u>Statement</u>	<u>Strongly Agree</u>	<u>Some- what Agree</u>	<u>No Opinion</u>	<u>Some- what Dis- agree</u>	<u>Strongly Dis- agree</u>	<u>All Agencies</u>
9. The agency would be able to keep its vehicles in use for longer portions of the day.** (N=3)	0	66.7	0	0	33.3	100
10. The agency would lose the community visibility provided by our agency vehicles. (N=3)	0	33.3	0	66.7	0	100

*In response to the following question asked of managers of agencies not affiliated with LISTS: "Coordinating the transportation of human service agencies through vehicle sharing or centralized purchasing of transportation services can lead to many changes for the agency. Please indicate whether you agree or disagree that these types of changes would occur if (or did occur when) your agency coordinated its transportation program with other agencies." Numbers listed are the percentage of respondents who checked each response.

**If the agency has no vehicles of its own, this question was skipped.

SOURCE: Lancaster County Human Service Agency Surveys, December 1982; calculations by Charles River Associates, 1983.

Responses to statements number 5 and 6 indicated skepticism concerning LISTS ability to decrease transportation costs and increase the level of ridesharing. In both cases, 57.1 percent either disagreed or strongly disagreed that LISTS would result in improvement in these areas.

Statements number 7 through 10 involved the impact of LISTS on agency administration and on the operation of their own vehicles. Results were inconclusive concerning administration, with half the responding managers agreeing that some loss of control over their transportation program would result and half disagreeing with the statement that LISTS would interfere with the budget process. Managers of agencies owning vehicles felt that use of LISTS would allow greater use of their own vehicles and that the visibility of the agency in the community would not be affected by LISTS.

The responses of non-affiliated agency managers indicate a generally positive attitude toward LISTS, although a majority do not see potential for cost savings in using the service. While some agencies do not provide enough transportation to make LISTS affiliation worthwhile, there does appear to be some potential for increasing the number of agencies affiliated with LISTS.

4.5 SUMMARY OF THE RESPONSE OF USERS TO LISTS

In summary, it appears that LISTS serves a large but limited portion of the handicapped and elderly populations. As the SET provider, LISTS serves nonambulatory persons residing in the Lancaster City sector. LISTS' major influence on this program seems to be its positive influence on program costs. A negative aspect of the SET service arrangement is that service is available only in the Lancaster City sector rather than the slightly larger urbanized area, which was the original target area for the program. This policy was determined for budgetary reasons by the Red Rose Transit Authority, however, not by LISTS. As the AdVANce provider, LISTS has also had a positive influence on program costs, allowing for more trips to be provided with the County's allotted program funds and resulting in lower costs for AdVANce users. In exchange for low program costs, however, service to Lancaster City and within rural sectors is available only on specific days of the week.

Over 40 human service agencies have contracts with LISTS for transportation programs. LISTS-affiliated agencies serve more clients, have larger transportation budgets, and provide transportation for different purposes than do non-affiliated agencies. The purposes for which an agency provides transportation are important factors in predicting whether or not an agency uses LISTS. Agencies that serve nonambulatory clients are less likely to use LISTS than other agencies are. The majority of LISTS-affiliated agency managers rate LISTS service equal to or better than the service used before LISTS.

Agency satisfaction with LISTS results from a number of factors. Most agency managers feel that their transportation expenses are less than they would have been without LISTS and that convenience and flexibility of service have been improved. In addition, LISTS staff receives credit for running a professional operation and for showing sensitivity to both agency and client needs. This sensitivity is important because of the great variety of social service transportation needs found in Lancaster County. Given this variety, LISTS cannot be expected to serve all needs. Some agencies view LISTS as their primary supplier of transportation, while others use LISTS to supplement their own service or to provide occasional specialized service. Some non-affiliated agencies have little incentive to participate in LISTS since their transportation needs are so limited. Other agencies may be attracted, however, by improved service to non-ambulatory persons and more frequent service in rural areas.

5. CONCEPT FEASIBILITY AND TRANSFERABILITY

Preceding sections of this case study have explored LISTS' service delivery and administrative structure, the effect of LISTS on the supply of specialized transportation services, and the characteristics and response of the market for LISTS services. In this section, we look at LISTS from two different perspectives -- concept feasibility and concept transferability.

We define concept feasibility as the degree to which a program meets the goals set for it. Assessing concept feasibility can be complex because many goals can be set for a program such as LISTS. Here, we review the goals set for LISTS by its Implementation Task Force and the Lancaster County Planning Commission, as formulated in an FHWA Section 147 grant application. In this way, we can assess the extent to which LISTS has been able to fulfill the expectations of those people most instrumental in its development.

Assessing concept transferability requires identifying the conditions under which a program can be transferred to another site with similar results. This requires as a precondition understanding the environment under which the program is originally administered as well as the details and results of the original program.

5.1 CONCEPT FEASIBILITY

LISTS adopted the following seven objectives in its FHWA Section 147 grant application in 1977.*

1. To demonstrate the feasibility of serving persons with a wide range of transportation disadvantages on common vehicles.
2. To develop contractual agreements for channeling funds from numerous Federal, state, and local agencies into a comprehensive transportation system.
3. To develop appropriate operating policies to coordinate door-to-door service with fixed-route service, thereby expanding the effective service area of the fixed-route system and transporting persons in the most cost effective manner.
4. To demonstrate the cost-effectiveness of consolidating social service agency transportation efforts into one comprehensive system.

*LISTS, FHWA Section 147 Grant Application, 1977. These goals are also discussed in Carter-Goble Associates, Paratransit Case Studies, 1981.

5. To demonstrate the ability of private profit making companies to provide specialized services to a variety of transportation-disadvantaged persons.

6. To make specialized transportation services more readily accessible to eligible persons by reducing the number of independent systems and establishing one "visible" organization with responsibility for information dissemination and provision of service.

7. To gather data on operating characteristics and travel demand that will facilitate an analysis of the feasibility of extending door-to-door and feeder service to other transportation-disadvantaged persons and to the general public.

On its first objective, demonstrating "the feasibility of serving a wide range" of people, LISTS has had only limited success. LISTS does serve a wide range of persons, including the elderly, low-income people, and physically handicapped people. The major factor hindering LISTS' achievement of this goal, however, is its inability to fully integrate into the system people requiring the use of lift equipment. In Lancaster City, where the LISTS carrier operates a ramp-equipped vehicle and has direct access to LISTS' lift vans, the nonambulatory are regularly served by the broker. In rural sectors, however, few requests for special equipment are received and some carriers are reluctant to use the equipment when requested. It is not clear, however, what level of demand for lift-equipped service exists in rural sectors.

On its second and third objectives, channeling funds from a variety of agencies and integrating paratransit with the fixed-route system, LISTS has clearly had success. Currently, LISTS receives Federal monies for its administrative expenses, coordinates a major state-funded transportation assistance program, and provides service to 40 local agencies. Furthermore, it has developed these relationships with a continuity in its operations despite changing patterns of program and agency funding. LISTS has also developed a stable and mutually beneficial relationship with the RRTA. Although feeder service and trips completely served by fixed-route buses comprise only a small percentage of its total trip requests, LISTS brokers both kinds of service to the RRTA. Use of the RRTA by area agencies, thus, has been fully integrated into LISTS' operations.

In Section 3 of this report we discussed LISTS' attainment of its fourth objective, demonstrating the cost-effectiveness of consolidating human service agency transportation. For the majority of the trips it serves, LISTS has been successful in restraining or reducing the cost of service provision. It is important to note, however, that from the viewpoint of the agencies, LISTS has not proved to be a cost-effective method for serving all trips. There are still many trips that the agencies prefer to serve in their own vehicles, using volunteers or private providers outside the LISTS network. This dual system appears to work very well and few agencies have indicated the desire to purchase more service through LISTS.

On its fifth objective, demonstrating the ability of private profit-making providers to serve a variety of transportation-disadvantaged persons, LISTS has had mixed results. For many transportation-disadvantaged groups, particularly the elderly and the semi-ambulatory, private providers have proved that they can provide a service that most agency managers consider equal to or better than their previous service. The carriers have also proved that in a competitive environment they can provide this service at a reasonable cost; however, they have not been able to provide this service quality to all groups of the transportation-disadvantaged. As discussed above, only the SET provider serves a significant number of trips for persons requiring the use of lift equipment. The remaining providers have few requests from this group, perhaps because so little service is available. As a result, carriers find that providing lift trips is unprofitable and want to provide fewer. LISTS seems to be unable to break out of this cycle, which casts a shadow on the otherwise significant achievements of LISTS' carrier network.

LISTS' sixth objective, to make specialized transportation services more readily accessible to eligible persons by reducing the number of independent systems, has in some ways been met, and in others has not. LISTS has succeeded in coordinating and consolidating a large fraction of the county's specialized transportation resources. The major private paratransit companies in the county participate in LISTS, either as carriers or as competitors in the annual bidding process. Few agencies continue to maintain large fleets of vehicles. On the demand side, the way in which agency clients obtain service has not changed. Eligibility decisions and trip requests are still made by independent human service agencies. Given the variety of clients served and the specialized nature of many agencies, this appears to be the most effective method of operation. LISTS does not have the resources or the expertise to determine client eligibility for specific agencies. It is likely that some agencies will continue to provide their own transportation, due to the specialized nature of their needs. This should not be construed as a failure on the part of LISTS.

On its final objective, data gathering, LISTS has had only a limited ability to meet its goals. Administrative funding for LISTS has been tight and the broker has been able to perform only those activities directly related to service provision. When discretionary funds or staff time have been available, LISTS has preferred to use it for information dissemination and outreach to new agencies rather than data gathering. These activities seem to be higher priorities for the broker at this stage in its development.

On an overall basis, LISTS has been successful in achieving its objectives. The broker has made cost-effective use of private providers and has demonstrated an ability to serve a wide range of agency transportation needs. The agency has operated effectively on a small budget and without substantial cash reserves. Its ability to adapt to almost yearly changes in

funding programs and government transportation policies has been exceptional.

LISTS has successfully served agency clients with a wide range of transportation handicaps. The limited number of lift trips provided, however, indicates that LISTS has not been entirely effective in reaching this market. LISTS must find a better arrangement for the provision of lift-equipped service to rural sectors and must also obtain better measures of the demand for this type of service. This ties into the final objective of improved data gathering. Given LISTS' limited administrative budget, it is unlikely that data-gathering capability can be improved without some type of additional funding.

5.2 CONCEPT TRANSFERABILITY

This section discusses those features of the LISTS program that another locality, planning a similar program, may wish to replicate. We focus on three achievements of LISTS and examine the conditions under which similar results might be attainable in a different location. These three features are: 1) early and sustained agency participation; 2) low per-trip transportation costs; and 3) low administrative costs.

LISTS received an early and sustained response from county human service agencies. LISTS' original goal was to serve approximately 20,000 trips a month within a year of implementation, an apparently unrealistic goal. In comparison with other broker programs, however, LISTS was implemented quickly and has enjoyed considerable agency support. The Office of Aging participated in its first year of operation, bringing with it a large portion of LISTS' regular trip requests. For the last two fiscal years (1980-81 and 1981-82), LISTS has served about 14,500 trips each month. This level of demand has allowed LISTS providers to achieve service economies (as evidenced by declining average trip costs in real terms) while providing service throughout the county. The stability of demand has also been beneficial to LISTS, enabling it to develop a strong base of regularly-scheduled trips (thereby reducing scheduling-related costs) and routine administrative procedures (thereby reducing the demands on LISTS' administration).

Localities implementing a similar brokerage system and expecting a similar level of support should be mindful of LISTS' pre-implementation history. Among the reasons for LISTS' high level of agency support are that it was designed specifically to serve the agencies, particularly the Office on Aging, and that agencies played an integral role in its development. Readers will recall that before LISTS, many agencies faced the possibility of having no suitable specialized service available to them. LISTS represented a carefully crafted replacement for agency services at that time and, in response, many agencies use LISTS on a regular basis.

The second feature of LISTS that another locality might want to replicate is its low per-trip transportation costs. In fiscal year 1981-82, the average transportation cost of a LISTS trip was \$2.12.

Two factors are important in understanding why LISTS' costs are so low and what a locality would need to do to duplicate this result. First, LISTS has managed to engender a very competitive network of carriers even though it operates on a sector system. That is, even though LISTS assigns the right to provide service in each sector to one carrier, there is a sufficient level of competition in the system to ensure that no carrier feels safe from a competitive challenge. Fortunately, Lancaster County had a healthy paratransit industry before LISTS and the broker has actively solicited participation by all appropriately regulated carriers. An actively competitive industry is necessary to promote service efficiencies and, hence, low transportation costs.

Second, LISTS' low per-trip costs are partly a function of the types of trips it serves. Many of LISTS trips are pre-scheduled group trips, which allow carriers to operate almost on a fixed-route basis, and can be served in a very cost-effective manner. Furthermore, LISTS restricts access to its high-cost services. Demand for direct-line trips, which are among the most costly trips LISTS provides, is channeled into two or three days of service. This procedure allows LISTS to increase its ridesharing and reduce its costs.

Low administrative costs is the third feature of LISTS that another locality may want to replicate. In 1981-82, LISTS' administrative costs were 15.6 percent of its total expenses. On an absolute basis, only \$66,917 was spent on LISTS' administration that year, including expenses related to the two lift-equipped vehicles. Several aspects of LISTS' administrative set-up are worth noting. First, the broker limits its administrative activities. It is involved in certifying eligibility only for non-agency-sponsored individuals using the AdVANce program, and this activity has been limited by the small number of applications LISTS has received. The agencies are responsible for certifying client eligibility for all trips they sponsor, including AdVANce trips, and the broker engages in no regulatory activities. LISTS monitors carriers' performance primarily through complaint procedures, but also has a staff member ride with each carrier. Moreover, LISTS schedules only a segment of its trip requests, allowing carriers to schedule the remainder.

A second factor contributing to LISTS' low administrative costs is that LISTS staff work hard and receive modest salaries. All of LISTS' daily activities are performed by four people. In 1981-82, the total wages earned by these four people were approximately \$35,600. In localities where wages are higher, these costs may be difficult to duplicate.

5.3 CONCLUSIONS

In conclusion, Lancaster County's experience in coordinating specialized transportation services through a transportation broker has been successful, as measured by LISTS' achievement of the goals set for it. Forty human service agencies participate in the LISTS program and most express satisfaction with the quality and cost of service provided. Strong competition for service contracts among private providers and low administrative expenses have allowed LISTS to provide service at reasonable cost. Some agencies have chosen to continue operation of their own vehicles and supplement their services with LISTS. Other agencies require transportation service on an infrequent basis but remain affiliated with LISTS. Thus, LISTS has been able to fill several different roles in the overall human service agency transportation system.

The fact that LISTS does not provide all human service agency transportation in Lancaster County should not be considered evidence of failure. However, the low utilization of LISTS service by non-ambulatory persons outside the Lancaster City sector has been disappointing. Private carriers in the rural sectors have been reluctant to provide these trips due to the additional time and costs required. It is likely that LISTS will need to provide some additional incentives to carriers in order to increase the level of service to rural, non-ambulatory persons. However, a data-gathering effort would be needed first to identify the level of demand which exists for this type of service.

Three reasons for using LISTS as a case study were identified in the introduction. The conclusions of the case study with respect to each of the reasons are summarized briefly in the next three sections.

5.3.1 LISTS' Impact on Rural Public Transportation

The first reason for studying LISTS was that it provided an example of brokerage in a county with a large rural population. The dispersion of population over a wide geographical area led LISTS to divide the county into six sectors: one for Lancaster City and its immediate suburbs; the other five for wedge-shaped rural sectors fanning out from Lancaster. The selection of a private carrier in each sector encouraged responsiveness to local agency and client needs. Costs were controlled by limiting service, with few exceptions, to travel within each sector and travel between individual sectors and Lancaster City.

Another, more serious limitation has been the restriction of some service to specific days of the week. This has been necessary in rural sectors in order to group trips and control costs, but has caused hardship for some agencies and clients, particularly with regard to medical appointments. On the whole, LISTS has been adept at defining and selecting the tradeoffs required to serve a scattered, rural population.

5.3.2 LISTS' Impact on the Fixed-Route Bus System

The second reason for selecting LISTS was that it involved the local public bus system (RRTA) as part of the coordinated system. Although LISTS was envisioned in part as a feeder service to the RRTA, it has provided little of this type of service. The broker has had an impact on RRTA in other ways, however. LISTS serves as the provider for RRTA's Special Efforts Transportation (SET) program, which provides a user-side subsidy for trips taken by persons unable to use fixed-route service and residing in the Lancaster urbanized area.

Use of LISTS to provide this specialized service enables RRTA to benefit from the low costs resulting from LISTS' use of competitive bidding among private providers. It is clear the RRTA could not provide SET service itself at as low a cost as LISTS. LISTS' system of reimbursement also provides a financial incentive to the carrier to organize shared rides.

RRTA controls the fare structure and hours of operation for SET service but because LISTS' Lancaster City sector is slightly smaller than the Lancaster urbanized area (the area originally designated for SET service), the area receiving SET service is slightly more limited than that originally designated by RRTA.

Because no data have been collected on users of the SET program, the adequacy of the service arrangement between LISTS and RRTA cannot be fully evaluated. The low cost of the LISTS program, however, indicates that use of a broker is a reasonable alternative for transit authorities seeking a cost-effective method of providing service to the handicapped. It should be noted, however, that RRTA received no Section 13(c) complaints from its union regarding the brokering of specialized service through private providers. This will not always be the case, particularly in large urban areas.

5.3.3 Impact of LISTS' Organizational Structure on Costs

The third area of interest involved the organizational nature of LISTS and its impact on costs. LISTS provided a test of a "no frills" brokerage application in which most service planning, outreach activities, and regulatory activities were left to private providers and the agencies served.

Although a cross-cutting study would be required to determine how LISTS' costs compare to those of other systems, the administrative costs of the system are clearly very low, and the competitive bidding process for selecting providers has prevented escalation of transportation costs. Human service agencies using LISTS are generally satisfied with the cost and quality of service they receive.

5.3.4 Limitations of LISTS' Approach to Brokerage

The LISTS approach to brokerage does have limitations. Private providers have not had adequate financial incentive to serve trips by non-ambulatory clients and, as a result, few of these trips are provided through LISTS outside the Lancaster City sector. In order to increase ridesharing, certain services in the rural sectors are provided only two or three days per week. A number of agencies expressed a desire for more flexibility in the scheduling of LISTS trips.

LISTS has not caused human service agencies to abandon their own transportation service. Some agencies use LISTS as their primary provider but supplement service with their own vehicles. Other agencies use LISTS to supplement their own vehicles. Agencies that have not affiliated with LISTS tend to have limited transportation requirements that can be met at a low cost with volunteer drivers and either donated or employee-owned vehicles.

The concept of brokering human service agency transportation is based on the hypothesis that the existence of a large number of small, uncoordinated transportation systems is economically inefficient. It does not necessarily follow, however, that all human service agency transportation should be consolidated under one agency. LISTS has shown that an agency with more modest objectives and a modest budget can effectively serve a wide range of human service transportation needs.

APPENDIX A
SURVEY OF LISTS-AFFILIATED AGENCIES

Please Note:
This Column
Is For Use
In Survey
Tabulation.

Part 1: QUESTIONS ABOUT YOUR AGENCY

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR AGENCY AND ITS CLIENTS.

1
1

Agency Name: _____
Address: _____
Telephone: _____
Contact Person: _____ Title: _____

2 3 4

1. Is your agency affiliated with other Lancaster County human service agencies?

5

1. _____ No
2. _____ Yes

Which Agencies? _____

6 7

2. Which of the following would best describe your organization?
(Please check the one that applies.)

8

1. _____ Private, for profit 3. _____ Public
2. _____ Private, not-for-profit 4. _____ Other (Please specify)

3. What are the major funding sources of your agency and what percentage of total agency funds comes from each source?

<u>Funding Source</u>	<u>Percentage of agency funds</u>	
_____	_____	9 10
_____	_____	11 12
_____	_____	13 14
_____	_____	15 16
_____	_____	17 18
All Sources	100 %	

4. What type of clients does your agency serve? (Please check all that apply.)

- | | | |
|-----------------------------|-------------------------------|----|
| 1. <input type="checkbox"/> | Elderly | 19 |
| 2. <input type="checkbox"/> | Physically Handicapped | 20 |
| 3. <input type="checkbox"/> | Mentally Handicapped | 21 |
| 4. <input type="checkbox"/> | Others (Please Specify) _____ | 22 |

5. What type of services does your agency provide? (Please check all that apply.)

- | | | | | |
|-----------------------------|-------------------|-----------------------------|-------------------------|-------|
| 1. <input type="checkbox"/> | Counseling | 6. <input type="checkbox"/> | Physical Rehabilitation | 23 24 |
| 2. <input type="checkbox"/> | Group Meals | 7. <input type="checkbox"/> | Vocational Training | 25 26 |
| 3. <input type="checkbox"/> | Recreation/Social | 8. <input type="checkbox"/> | Economic Assistance | 27 28 |
| 4. <input type="checkbox"/> | Education | 9. <input type="checkbox"/> | Other (Please specify.) | 29 30 |
| 5. <input type="checkbox"/> | Transportation | | _____ | |

6. Approximately how many clients does your agency currently serve?

_____ clients 31 32 33 34

- | | | |
|----|--|----------------|
| 7. | What percentage of these clients use agency services at least once a week?

_____ percent | 35 36 |
| 8. | What requirements must individuals meet to be served by your agency?
(Please check all that apply.) | 37 |
| | 1. _____ They must be over age _____. (Please fill in.) | 38 |
| | 2. _____ They must meet specific income guidelines. | 39 |
| | 3. _____ They must be physically handicapped.
(Please describe type of handicap, if any) _____ | 40 |
| | 4. _____ They must be mentally handicapped. | 41 |
| | 5. _____ They must live in a specific area. | 42 |
| | 6. _____ They must be of a particular religious faith. | 43 |
| | 7. _____ They must be of a particular profession. | 44 |
| | 8. _____ They must be referred by another agency. | 45 |
| | 9. _____ No requirements for clients. | 46 |
| | 10. _____ Other requirements. (Please specify.) _____

_____ | 47 |
| 9. | What percentage of your clients are ambulatory and what percentage require the use of a wheelchair?

_____ percent are ambulatory.

_____ percent require the use of a wheelchair. | 48 49
50 51 |

Part 2: QUESTIONS ABOUT THE AGENCY'S TRANSPORTATION SERVICES

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT THE TRANSPORTATION SERVICES PROVIDED BY YOUR AGENCY

10. Does your agency provide transportation to clients in any of the following ways?
- | | | | | | |
|--|-----------------------------|-----|-----------------------------|----|-----------|
| Operate agency vehicles? | 1. <input type="checkbox"/> | Yes | 2. <input type="checkbox"/> | No | <u>52</u> |
| Purchase transportation services directly from private carriers? | 1. <input type="checkbox"/> | Yes | 2. <input type="checkbox"/> | No | <u>53</u> |
| Use volunteers or staff who drive their own vehicles? | 1. <input type="checkbox"/> | Yes | 2. <input type="checkbox"/> | No | <u>54</u> |
| Reimburse clients for transportation expenses? | 1. <input type="checkbox"/> | Yes | 2. <input type="checkbox"/> | No | <u>55</u> |
| Purchase service through LISTS | 1. <input type="checkbox"/> | Yes | 2. <input type="checkbox"/> | No | <u>56</u> |
11. Are you able to serve all your clients' requests for service? 57
1. Yes
2. No Why not? (Please explain.) 58
- _____
- _____
12. Are decisions concerning the agency's transportation services made at the agency? 59
1. Yes
2. No Who makes transportation decisions for the agency?
- _____
- _____
13. Considering all carriers and vehicles, for what purposes does your agency provide transportation? (Check all that apply.) 60
- | | | |
|-----------------------------|---|-----------|
| 1. <input type="checkbox"/> | Travel to and from the agency | <u>61</u> |
| 2. <input type="checkbox"/> | Travel to group-meal sites (including meals served at the agency) | <u>62</u> |
| 3. <input type="checkbox"/> | Travel to medical appointment, physical rehabilitation, etc. | <u>63</u> |
| 4. <input type="checkbox"/> | Travel to group social outings and events | <u>64</u> |
| 5. <input type="checkbox"/> | Travel to employment | <u>65</u> |
| 6. <input type="checkbox"/> | Travel for shopping purposes | <u>66</u> |
| 7. <input type="checkbox"/> | Travel to educational classes | <u>67</u> |
| 8. <input type="checkbox"/> | The agency provides transportation for other purposes. (Please list these.) _____ | <u>68</u> |
- _____
- _____

14. Does your agency own or operate any vehicles?
 1. _____ Yes
 2. _____ No PLEASE SKIP TO QUESTION 24 AND CONTINUE SURVEY. 68
15. How many vehicles does your agency own or operate?
 _____ vehicles (Please fill in number.) 69 70
16. How many of these vehicles are ramp or lift equipped?
 _____ vehicles (Please fill in number.) 71 72
17. Are advance reservations required for transportation services in agency vehicles?
 1. _____ No
 2. _____ Yes How far in advance? _____ hours 73
74 75
18. Please complete the following sentences by filling in the number of each type of vehicle owned or operated by your agency. 2
1
 The agency owns or operates _____ sedans. 2 3 4
 The agency owns or operates _____ vans.
 The agency owns or operates _____ buses.
19. Of the vehicles that your agency owns or operates, how many does the agency own? 5 6
7 8
9 10
11 12
 _____ vehicles
20. Where did your agency obtain funds to purchase any or all of these vehicles? (Please check as many as apply.) 13
14
15
16
17
18
 1. _____ Federal Section 16(b)(2) grants
 2. _____ General agency funds
 3. _____ State funds
 4. _____ County funds
 5. _____ Local (city or town) funds
 6. _____ Other (Please describe) _____

21. Who owns the vehicles, if any, that your agency operates but does not own?

22. Are there any restrictions on your agency's use of any of its vehicles?

1. No 1

2. Yes What are these restrictions? 2

23. For what purposes does your agency use its own vehicles? (Please check all that apply.)

1. Transport clients to and from the agency 2

2. Transport clients to group meal sites (including meals served at the agency) 2

3. Transport clients to medical appointment, physical rehabilitation centers, etc. 2

4. Transport clients to group social outings and events 2

5. Transport clients to their jobs or workshops 2

6. Transport clients for shopping purposes 2

7. Transport clients to educational classes 2

8. Other client activities (Please describe.) 2

_____ 2

9. The agency does not use its own vehicles to transport clients. 2

24. Does your agency purchase transportation services from providers other than LISTS, the Lancaster Integrated Transportation System?

1. Yes 2

2. No PLEASE SKIP TO QUESTION 29 AND CONTINUE SURVEY. 3

25. From which carrier or carriers does your agency purchase service?
(Please check all that apply but do not include carriers that you use
only through a contract with LISTS.)
- | | | | | |
|-----------------------------|---------------------|-----------------------------|-------------------------|----|
| 1. <input type="checkbox"/> | Yellow Cab | 6. <input type="checkbox"/> | Columbia Taxi | 31 |
| 2. <input type="checkbox"/> | Friendly Taxi | 7. <input type="checkbox"/> | Cisney's Van | 32 |
| 3. <input type="checkbox"/> | Johnson's Bus | 8. <input type="checkbox"/> | Whery's Wagon | 33 |
| 4. <input type="checkbox"/> | Lancaster Limousine | 9. <input type="checkbox"/> | Others (please specify) | 34 |
| | | | _____ | 35 |
| | | | _____ | 36 |
| | | | _____ | 37 |
26. Are advance reservations required for service by this carrier(s)?
- | | | |
|-----------------------------|--------------------------------------|----|
| 1. <input type="checkbox"/> | No | 38 |
| 2. <input type="checkbox"/> | Yes How far in advance? _____ hours. | 39 |
| | | 40 |
27. Approximately how much does your agency pay on average for a one-way
client trip provided by these carriers?
- \$ _____ per one-way trip
- | | |
|----|----|
| 41 | 42 |
| 43 | 44 |
| 45 | 46 |
28. How is your agency charged for service from these carriers? (Please
check all that apply.)
- | | | |
|-----------------------------|---|----|
| 1. <input type="checkbox"/> | Agency is charged a pre-determined price for each trip. | 47 |
| 2. <input type="checkbox"/> | Agency is charged the metered fare. | 48 |
| 3. <input type="checkbox"/> | Agency is charged for service on a per-hour basis | 49 |
| 4. <input type="checkbox"/> | Other (Please describe) _____ | 50 |
| | _____ | |
29. a. Approximately how many trips per week does your agency provide
using carriers other than LISTS? (Please do not include trips
provided in agency vehicles.)
- _____ one-way trips per week
- | | | | |
|----|----|----|----|
| 51 | 52 | 53 | 54 |
|----|----|----|----|
- b. What percentage of these trips are group trips?
- _____ percent of trips provided by carriers other than LISTS are
group trips
- | | |
|----|----|
| 55 | 56 |
|----|----|

30. a. Approximately how many one-way trips per week does your agency provide using agency vehicles?
 _____ one-way trips per week 57 58 59 60
- b. What percentage of these trips are group trips?
 _____ percent of trips provided by agency vehicles are group trips 61 62
31. a. Approximately how many trips per week does your agency provide through LISTS?
 _____ one-way trips per week 63 64 65 66
- b. What percentage of these trips are group trips?
 _____ percent of trips provided through LISTS are group trips 67 68
32. How much, if anything, does your agency charge its clients for transportation services?
 \$ _____ per one-way trip 69 70 71
33. Approximately how much did your agency spend in 1982 on transportation services for its clients, including the cost of agency-operated vehicles?
 \$ _____ 72 73 74 75 76 77
34. Approximately what percentage is this of the total agency budget?
 _____ percent 78 79
3
1
2 3 4
35. How much does the agency expect to spend on transportation services in 1983?
 \$ _____ 5 6 7 8 9 10

Part 3 AGENCY EXPERIENCE WITH LISTS

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR EXPERIENCES WITH LISTS.

36. When did your agency begin to purchase service through LISTS?

_____ month _____ year

11 12 13 14

37. For what trip purposes does your agency use LISTS service?
(Please check all that apply.)

- 1. _____ Transport clients to and from the agency. 15 16
- 2. _____ Transport clients to group-meal sites (including meals served at the agency). 17 18
- 3. _____ Transport clients to medical appointments, physical rehabilitation centers, etc. 19 20
- 4. _____ Transport clients to group social outings and events. 21 22
- 5. _____ Transport clients to their jobs or workshops.
- 6. _____ Transport clients for shopping purposes.
- 7. _____ Transport clients to educational classes.
- 8. _____ Other client activities (please describe).

38. Has the agency had any difficulties with LISTS' billing procedures?
(Please check one.)

- 1. _____ No difficulties. 23
- 2. _____ Minor difficulties that have been resolved satisfactorily.
- 3. _____ Major difficulties that have already been resolved.
(Please describe.) _____

4. _____ Difficulties that have not yet been resolved.
(Please describe.) _____

For
Office
Use

39. What transportation providers or services did your agency previously use for trips it now provides through LISTS?

24

25

1. Agency used agency vehicles before LISTS
2. Agency used other carriers (please specify)

26

27

3. Agency did not provide these trips before LISTS

28

29

40. Which LISTS carrier does your agency use? (Please check one)

30

31

1. Friendly Cab 4. Columbia Taxi
2. Lancaster Limousine 5. Cisney's Van
3. Red Rose Transit

32

33

34

35

36

41. Is LISTS able to meet all your agency's needs for purchased transportation service?

1. Yes
2. No Please explain

37

42. Does your agency have a need for LISTS service on days when LISTS service is not available?

38

1. No
2. Yes What days of the week?

43. Does LISTS adequately serve your agency's need for lift-equipped transportation?

39

1. Yes
2. No Please explain

44. Are there improvements that you would like to see LISTS make?

1. No
2. Yes Please explain

40

41 42

45. Below are listed a number of LISTS service characteristics. Please indicate how these service characteristics differ from the service you received before your agency became affiliated with LISTS.

	(1) Much Better Than Previous Service	(2) Somewhat Better Than Previous Service	(3) The Same As Previous Service	(4) Somewhat Worse Than Previous Service	(5) Much Worse Than Previous Service	
Driver Sensitivity	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>43</u>
Complaint Procedures	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>44</u>
Time Spent Waiting for Vehicle to Arrive	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>45</u>
Time Spent in Vehicle	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>46</u>
Vehicle Safety	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>47</u>
Availability of Service When Needed	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>48</u>
Service Hours	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>49</u>
Provision of Door-To- Door Service	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>50</u>
Accessible Vehicles	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>51</u>
Ease of scheduling trips	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>52</u>

46. Please indicate whether you agree or disagree that the agency has received any of the following benefits from contracting with LISTS.

	(1) <u>Agree</u>	(2) <u>Disagree</u>	(3) No <u>Opinion</u>	
a) Agency transportation costs have decreased or risen more slowly than they would have without LISTS.	___	___	___	<u>53</u>
b) The agency receives a similar or higher quality service from LISTS than it did before.	___	___	___	<u>54</u>
c) The agency is more flexible in the <u>amount</u> of service it can provide for its clients.	___	___	___	<u>55</u>
d) The agency is more flexible in <u>when</u> it can provide service for its clients.	___	___	___	<u>56</u>
e) The agency has been able to use its vehicles more efficiently by using LISTS to provide single-passenger trips.*	___	___	___	<u>57</u>
f) Scheduling trips is easier than before.	___	___	___	<u>58</u>
g) It is easier to register complaints about service than before.	___	___	___	<u>59</u>
h) Complaints are resolved in a more satisfactory manner than before.	___	___	___	<u>60</u>
i) LISTS is an important supplement to our other vehicles when a vehicle breaks down or a driver is unavailable.*	___	___	___	<u>61</u>
j) LISTS can negotiate with carriers more successfully than an individual agency can.	___	___	___	<u>62</u>

*If your agency has no vehicles of its own, please skip over this statement.

APPENDIX B
SURVEY OF NON-AFFILIATED AGENCIES

Please Note:
This Column
Is For Use
In Survey
Tabulation.

Part 1: QUESTIONS ABOUT YOUR AGENCY

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR AGENCY AND ITS CLIENTS.

1
1

Agency Name: _____
Address: _____
Telephone: _____
Contact Person: _____ Title: _____

2 3 4

1. Is your agency affiliated with other Lancaster County human service agencies?

5

1. _____ No
2. _____ Yes

Which Agencies? _____

6 7

2. Which of the following would best describe your organization?
(Please check the one that applies.)

8

1. _____ Private, for profit 3. _____ Public
2. _____ Private, not-for-profit 4. _____ Other (Please specify)

3. What are the major funding sources of your agency and what percentage of total agency funds comes from each source?

<u>Funding Source</u>	<u>Percentage of agency funds</u>	
_____	_____	<u>9 10</u>
_____	_____	<u>11 12</u>
_____	_____	<u>13 14</u>
_____	_____	<u>15 16</u>
_____	_____	<u>17 18</u>
All Sources	100 %	

4. What type of clients does your agency serve? (Please check all that apply.)

- | | |
|---|-----------|
| 1. <input type="checkbox"/> Elderly | <u>19</u> |
| 2. <input type="checkbox"/> Physically Handicapped | <u>20</u> |
| 3. <input type="checkbox"/> Mentally Handicapped | <u>21</u> |
| 4. <input type="checkbox"/> Others (Please Specify) _____ | <u>22</u> |
| _____ | |
| _____ | |

5. What type of services does your agency provide? (Please check all that apply.)

- | | | |
|---|---|--------------|
| 1. <input type="checkbox"/> Counseling | 6. <input type="checkbox"/> Physical Rehabilitation | <u>23 24</u> |
| 2. <input type="checkbox"/> Group Meals | 7. <input type="checkbox"/> Vocational Training | <u>25 26</u> |
| 3. <input type="checkbox"/> Recreation/Social | 8. <input type="checkbox"/> Economic Assistance | <u>27 28</u> |
| 4. <input type="checkbox"/> Education | 9. <input type="checkbox"/> Other (Please specify.) | <u>29 30</u> |
| 5. <input type="checkbox"/> Transportation | _____ | |

6. Approximately how many clients does your agency currently serve?

_____ clients 31 32 33 34

- | | | |
|-----|--|----------------------|
| 7. | What percentage of these clients use agency services at least once a week?

_____ percent | 35 36 |
| 8. | What requirements must individuals meet to be served by your agency?
(Please check all that apply.) | 37
38 |
| 1. | _____ They must be over age _____. (Please fill in.) | 39 |
| 2. | _____ They must meet specific income guidelines. | 40 |
| 3. | _____ They must be physically handicapped.
(Please describe type of handicap, if any) _____ | 41 |
| 4. | _____ They must be mentally handicapped. | 42 |
| 5. | _____ They must live in a specific area. | 43 |
| 6. | _____ They must be of a particular religious faith. | 44 |
| 7. | _____ They must be of a particular profession. | 45 |
| 8. | _____ They must be referred by another agency. | 46 |
| 9. | _____ No requirements for clients. | 47 |
| 10. | _____ Other requirements. (Please specify.) _____

_____ | 48
49
50
51 |
| 9. | What percentage of your clients are ambulatory and what percentage require the use of a wheelchair?

_____ percent are ambulatory.

_____ percent require the use of a wheelchair. | 48 49
50 51 |

Part 2: QUESTIONS ABOUT THE AGENCY'S TRANSPORTATION SERVICES

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT THE TRANSPORTATION SERVICES PROVIDED BY YOUR AGENCY

10. Does your agency provide transportation to clients in any of the following ways?
- | | | | | | |
|--|----------|-----|----------|----|----|
| Operate agency vehicles? | 1. _____ | Yes | 2. _____ | No | 52 |
| Purchase transportation services directly from private carriers? | 1. _____ | Yes | 2. _____ | No | 53 |
| Use volunteers or staff who drive their own vehicles? | 1. _____ | Yes | 2. _____ | No | 54 |
| Reimburse clients for transportation expenses? | 1. _____ | Yes | 2. _____ | No | 55 |
| Purchase service through LISTS | 1. _____ | Yes | 2. _____ | No | 56 |
11. Are you able to serve all your clients' requests for service? 57
1. _____ Yes
2. _____ No Why not? (Please explain.) 58
- _____
- _____
12. Are decisions concerning the agency's transportation services made at the agency? 59
1. _____ Yes
2. _____ No Who makes transportation decisions for the agency?
- _____
- _____
13. Considering all carriers and vehicles, for what purposes does your agency provide transportation? (Check all that apply.) 60
- | | | |
|----------|---|----|
| 1. _____ | Travel to and from the agency | 61 |
| 2. _____ | Travel to group-meal sites (including meals served at the agency) | 62 |
| 3. _____ | Travel to medical appointment, physical rehabilitation, etc. | 63 |
| 4. _____ | Travel to group social outings and events | 64 |
| 5. _____ | Travel to employment | 64 |
| 6. _____ | Travel for shopping purposes | 65 |
| 7. _____ | Travel to educational classes | 65 |
| 8. _____ | The agency provides transportation for other purposes. (Please list these.) _____ | 66 |
| | _____ | 67 |
| | _____ | |

14. Does your agency own or operate any vehicles?
 1. _____ Yes 68
 2. _____ No PLEASE SKIP TO QUESTION 24 AND CONTINUE SURVEY.
15. How many vehicles does your agency own or operate?
 _____ vehicles (Please fill in number.) 69 70
16. How many of these vehicles are ramp or lift equipped?
 _____ vehicles (Please fill in number.) 71 72
17. Are advance reservations required for transportation services in agency vehicles?
 1. _____ No 73
 2. _____ Yes How far in advance? _____ hours 74 75
18. Please complete the following sentences by filling in the number of each type of vehicle owned or operated by your agency. 2
1
 The agency owns or operates _____ sedans. 2 3 4
 The agency owns or operates _____ vans.
 The agency owns or operates _____ buses.
19. Of the vehicles that your agency owns or operates, how many does the agency own? 5 6
7 8
 _____ vehicles 9 10
11 12
20. Where did your agency obtain funds to purchase any or all of these vehicles? (Please check as many as apply.) 13
 1. _____ Federal Section 16(b)(2) grants 14
 2. _____ General agency funds
 3. _____ State funds 15
 4. _____ County funds
 5. _____ Local (city or town) funds 16
 6. _____ Other (Please describe) _____ 17
18

21. Who owns the vehicles, if any, that your agency operates but does not own?

22. Are there any restrictions on your agency's use of any of its vehicles?

1. No 19

2. Yes What are these restrictions? 20

23. For what purposes does your agency use its own vehicles? (Please check all that apply.)

1. Transport clients to and from the agency 21

2. Transport clients to group meal sites (including meals served at the agency) 22

3. Transport clients to medical appointment, physical rehabilitation centers, etc. 23

4. Transport clients to group social outings and events 24

5. Transport clients to their jobs or workshops 25

6. Transport clients for shopping purposes 25

7. Transport clients to educational classes 26

8. Other client activities (Please describe.) 26

_____ 27

9. The agency does not use its own vehicles to transport clients. 28

_____ 29

24. Does your agency purchase transportation services from providers other than LISTS, the Lancaster Integrated Transportation System?

1. Yes

2. No PLEASE SKIP TO QUESTION 29 AND CONTINUE SURVEY. 30

For
Office
Use

25. From which carrier or carriers does your agency purchase service?
(Please check all that apply but do not include carriers that you use
only through a contract with LISTS.)
- | | | | | |
|-----------------------------|---------------------|-----------------------------|-------------------------|----|
| 1. <input type="checkbox"/> | Yellow Cab | 6. <input type="checkbox"/> | Columbia Taxi | 31 |
| 2. <input type="checkbox"/> | Friendly Taxi | 7. <input type="checkbox"/> | Cisney's Van | 32 |
| 3. <input type="checkbox"/> | Johnson's Bus | 8. <input type="checkbox"/> | Whery's Wagon | 33 |
| 4. <input type="checkbox"/> | Lancaster Limousine | 9. <input type="checkbox"/> | Others (please specify) | 34 |
| | | | | 35 |
| | | | | 36 |
| | | | | 37 |
26. Are advance reservations required for service by this carrier(s)?
- | | | |
|-----------------------------|--------------------------------------|----|
| 1. <input type="checkbox"/> | No | 38 |
| 2. <input type="checkbox"/> | Yes How far in advance? _____ hours. | 39 |
| | | 40 |
27. Approximately how much does your agency pay on average for a one-way
client trip provided by these carriers?
- | | | | | |
|---------------------------|----|----|----|----|
| \$ _____ per one-way trip | 41 | 42 | | |
| | 43 | 44 | 45 | 46 |
28. How is your agency charged for service from these carriers? (Please
check all that apply.)
- | | | |
|-----------------------------|---|----|
| 1. <input type="checkbox"/> | Agency is charged a pre-determined price for each trip. | 47 |
| 2. <input type="checkbox"/> | Agency is charged the metered fare. | 48 |
| 3. <input type="checkbox"/> | Agency is charged for service on a per-hour basis | 49 |
| 4. <input type="checkbox"/> | Other (Please describe) _____ | 50 |
29. a. Approximately how many trips per week does your agency provide
using carriers other than LISTS? (Please do not include trips
provided in agency vehicles.)
- | | | | | |
|------------------------------|----|----|----|----|
| _____ one-way trips per week | 51 | 52 | 53 | 54 |
|------------------------------|----|----|----|----|
- b. What percentage of these trips are group trips?
- | | | |
|---|----|----|
| _____ percent of trips provided by carriers other than LISTS are
group trips | 55 | 56 |
|---|----|----|

30. a. Approximately how many one-way trips per week does your agency provide using agency vehicles?
 _____ one-way trips per week 57 58 59 60
- b. What percentage of these trips are group trips?
 _____ percent of trips provided by agency vehicles are group trips 61 62
31. a. Approximately how many trips per week does your agency provide through LISTS?
 _____ one-way trips per week 63 64 65 66
- b. What percentage of these trips are group trips?
 _____ percent of trips provided through LISTS are group trips 67 68
32. How much, if anything, does your agency charge its clients for transportation services?
 \$ _____ per one-way trip 69 70 71
33. Approximately how much did your agency spend in 1982 on transportation services for its clients, including the cost of agency-operated vehicles?
 \$ _____ 72 73 74 75 76 77
34. Approximately what percentage is this of the total agency budget?
 _____ percent 78 79
3
1
2 3 4
35. How much does the agency expect to spend on transportation services in 1983?
 \$ _____ 5 6 7 8 9 10

Part 3: COORDINATED SERVICES

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT COORDINATING YOUR AGENCY'S TRANSPORTATION PROGRAM WITH THE PROGRAMS OF OTHER AGENCIES.

36. Are your transportation services coordinated in any way with the transportation services of other agencies and organizations? (e.g., integrated scheduling or dispatching, vehicle sharing, centralized purchasing of service, centralized maintenance, centralized billing.)

11

1. Yes
2. No

If yes, please describe _____

Agencies Involved _____

37. Has your agency ever considered purchasing service through LISTS, the Lancaster Integrated Specialized Transportation System?

12

1. Yes
2. No

38. Why did your agency decide not to purchase service through LISTS?

39. Does the agency have any plans to consider purchasing transportation service from LISTS in the future?

13

1. No
2. Yes (Please explain.)

40. Are there any special factors about your agency or restrictions that would prevent your agency from using a coordinated transportation system? (Please explain) _____

41. Coordinating the transportation of human service agencies through vehicle sharing or centralized purchasing of transportation services can lead to many changes for the agency. Some of the possible changes are described in the sentences below. Please indicate whether you agree or disagree that these types of changes would occur if (or did occur when) your agency coordinated its transportation program with other agencies.

	(1) <u>Strongly</u> <u>Agree</u>	(2) <u>Somewhat</u> <u>Agree</u>	(3) <u>No</u> <u>Opinion</u>	(4) <u>Somewhat</u> <u>Disagree</u>	(5) <u>Strongly</u> <u>Disagree</u>	
a) Agency transportation costs would decrease.	—	—	—	—	—	<u>14</u>
b) Drivers in a coordinated program would be as sensitive as our current drivers are.	—	—	—	—	—	<u>15</u>
c) The agency would receive a lower quality of transportation service than it currently receives.	—	—	—	—	—	<u>16</u>
d) The agency would be more flexible in the <u>amount</u> of service it could <u>provide</u> to its clients.	—	—	—	—	—	<u>17</u>
e) The agency would be more flexible in <u>when</u> it could provide service for its clients.	—	—	—	—	—	<u>18</u>
f) The agency would have less control over its transportation program.	—	—	—	—	—	<u>19</u>
g) The agency would be able to keep its vehicles in use for longer portions of the day.*	—	—	—	—	—	<u>20</u>
h) The agency would lose the community visibility provided by our agency vehicles.*	—	—	—	—	—	<u>21</u>
i) The agency would be able to increase ridesharing (the number of passengers in a vehicle).	—	—	—	—	—	<u>22</u>
j) The agency would have difficulty planning a budget for its transportation programs.	—	—	—	—	—	<u>23</u>

*If your agency has no vehicles, please skip over this statement.

Please feel free to elaborate on any of the answers you gave on this survey or to add any thoughts you or others in your organization may have concerning agency transportation.

THANK YOU FOR YOUR COOPERATION!

If you would like additional information about LISTS, please indicate below the person to whom the information should be sent.

_____ Yes, I would like additional information about LISTS.
Please send it to:

HE 18.5 .A
MTA- 84--

LISTS

Form DOT F 172
FORMERLY FORM D

DOT LIBRARY



00353038